

CURRENT NOTES

Your Monitor on the World of Atari

Vol. 12, No. 6

July/August 1992

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Speed ► Warp 9!

Speed ► Warp Drive!!!

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Stalk the Market

Bible Concordance 3

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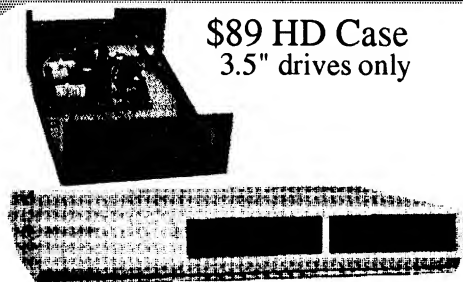
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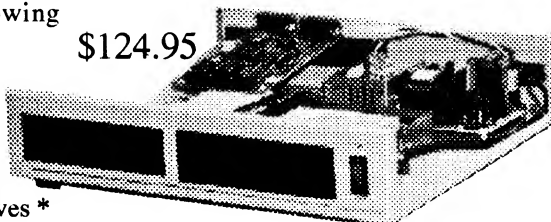
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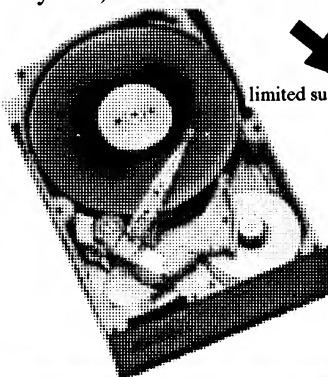
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For general information, contact Charles Hoffmann at 703-629-6734, on GENie mail as S. Hoffmann, on Delphi as CHUCKHOFFMANN, and on CompuServe under account 73740, 1507. You may also address any query to Charles Hoffmann, 5908 Bayshire Road, Springfield, VA 22152-1146.

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AtariFest '92 is presented by the Washington Area Atari Computer Enthusiasts

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PUBLISHER: Joe Waters, 122 N Johnson Rd, Sterling VA 20164 (703) 450-4761. GENIE: JOE.WATERS

ST. EDITOR: Frank Sommers, 4624 Langdrum Ln, Chevy Chase MD 20815 (301) 656- 0719.

8-BIT EDITOR: Rick Reaser, 4625 Whimsical Dr, Colorado Springs, CO 80917-3120 (719) 380-8082. GENIE: R.REASERJRI CompuServe: 72130,2073.

COPY EDITOR: Joyce Waters

CN's ANSWERMAN: Dave Troy, 410-544-6943. Write c/o Toad Computers, 556 Baltimore Annapolis Blvd, Severna Park, MD 21146-3818. GENIE: Toad-Serv.

CN COLUMNISTS: John Barnes, Richard Gunter, Mike Heininger, Rick Keene, Brian Miller, Rick Reaser, Dave Small, Frank Sommers, David Troy, Sam Wright, Andrzej Wrotniak.

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MOVING?

Don't forget to send in a change of address notice if you are moving. *Current Notes* is distributed via second class US mail. The post office does not forward second class publications; they throw them away.

The cover: Ever wonder what the Atari Mega STE2 looks like inside? This glimpse shows 2 megabytes of RAM occupying about a sixth of the floor space. As the commercials warn, "Do not attempt this at home" (unless you really know computer repair). Photo by Mike Heininger, (c) 1992.

ATARI SHOW ANNOUNCEMENTS

July 18: 1992 Blue Ridge ATARIFEST

The Blue Ridge Atarifest will be held from 10 am to 6 pm at the Westgate Shopping Center, Asheville, N.C. Banquet will be held Saturday evening immediately following the show (\$17.50/person). For more info, contact Van Estes, BRACE President (704) 685-8358.

July 25: MIST Atari Fest IV

The fourth MIST Atari Fest will be held again at the Castleway Conference Center, 6385 Castleplace Dr, Indianapolis, IN. The 1991 show drew 30 vendors and 500 individuals. For more information call Dan Ward (317) 254-0031 or send E-mail to D.WARD10 on GENie.

July 25 - 26: No. California Atari Expo

The first Northern California Atari show in two years was announced by a coalition of three local Atari user groups. The show will be held at the Exhibit Hall, 145 W. San Carlos, San Jose. The show will run from 10 a.m to 5 p.m. each day and admission is just \$5. For additional information on the show contact N. California Atari Expo, c/o SLCC, P.O. Box 1506, San Leandro, Ca 94577. GENie: M.WARNER8 or call at (510) 352-8118.

August 15 - 16: Connecticut AtariFest '92

The Connecticut AtariFest '92 will be held at the Sheraton Hotel at Bradley International Airport, Windsor Locks, CT. The show will showcase the latest Atari products and services, as well as offering seminars on desktop publishing and video production, hands-on instruction from manufacturers and software developers, MIDI demonstrations, giveaways, a swap room and much more. For more information contact Brian Gockley, chairman, 18 Elmwood Avenue, Bridgeport, CT 06605 [Phone (203) 332-1721].

August 23 - 24: Dusseldorf Atari show.

Look for Atari to unveil the Falcon at this monster show in Germany.

September 12 - 13: The Glendale Show

Southern California's Atari Faire has had the largest annual attendance of any continuing show series. For more information about the Glendale Show, contact John King Tarpinian at 818-246-7286.

October 10 - 11: The WAACE Atarifest '92

The largest east coast Atarifest will be held, once more, at the Sheraton-Reston Hotel, 11810 Sunrise Valley Dr, Reston VA 22091 from 10am - 6pm Saturday and Sunday. For more information contact Charles Hoffmann at 703-629-6734.

November 16 - 20: Fall COMDEX

The biggest computer trade show in the USA is held, once more, in Las Vegas, Nevada.

From the Editor's Desk

by Joe Waters

This is our double-month "summer" issue. If we are on schedule, you will be reading this sometime in the middle of July. It has to last you two months since the next issue won't be out until September.

Here at CN headquarters, Joyce and I often need the time offered by the summer break to catch up on all the things that we just couldn't get to because of CN's ongoing, hectic, publishing schedule. I know I am going to definitely try and close down my computer. The deck needs to be cleaned and stained, the garden is a jungle, the window frames have to be painted. We'll just put Atari on hold for a few weeks so we can enjoy some of life's other chores. The fall will come soon enough and will provide the whole Atari community with a good deal of excitement.

Meanwhile, I thought I'd start my "vacation" a little early. I read an interesting little piece by C.H. Muchmore in the June issue of the South Bay A.C.E. Gazette. To help put CN's Atari coverage in perspective, here is a glimpse at what we might be writing about if our readers had Macs or IBM PCs.

Unless you are one of the unfortunates who are attempting to cope with recent changes in the OS (operating systems) of the world's most "popular" two computers, you wouldn't believe the anguish experienced by PC users. Here are some examples:

Macintosh

A recent article in *Macworld* magazine is a vivid accounting of the kind of anger and frustration over troubles arising from upgrading to the new System 7 OS. This poor soul was in the process of getting a new hard drive for his system, and because the new drive would be factory-formatted for System 7, he decided to include the computer software upgrade kit in his order.

After installing the new drive and OS, he found out, to his dismay, that his two megs of RAM were all consumed by the OS, leaving nothing for running his programs. (The Macintosh does not have a ROM-based OS like Atari TOS 1.0, 1.4, and up.) So he was forced to spend another \$120 for two more megs of RAM, plus \$70 for installation ... this just to get his system up and running like it was before he "upgraded" to System 7.

Well, running almost like it was before. He discovered that the software he had been using to search for data wouldn't work right with System 7. He had to send away for a \$25 new version of that program.

Then the thesaurus feature of *Microsoft Word* wouldn't come up on the screen. The Microsoft HELP people suggested a workaround that was unsatisfactory. He had to contact the software company that makes the thesaurus, and was

advised to send money for an upgrade that would work with System 7. Three months later, the upgrade still hadn't arrived.

He tried working with *Word* and *HyperCard* and noted that the computer ran much slower than before, particularly with the screen redraws after a change to text. He decided to live with that temporarily, finished the project, and used the command to print on his ink-jet printer. It wouldn't print.

After getting the runaround from several people at the printer company, someone finally admitted that they had heard about the problem, but didn't know what to do about it. He was referred to the company that wrote the printer driver. Yes, they had a fix that he could get for \$60. He had to order it.

So, three months after upgrading to System 7, the Mac user is almost able to do what he could do before. His Mac runs slower, he's still waiting for the word-finder upgrade, he's out several hundred dollars plus long distance phone calls, and he has more computer crashes than before. He commented that there are no benefits to the System 7 upgrade, and the only interesting thing is the balloon help, which he uses like a game when he's bored. He runs the cursor around the screen to see what balloon pops up.

IBM

IBM's long-hyped answer to Microsoft's *Windows* OS was finally unleashed upon the public during the second quarter of '92. The IBM OS/2 2.0 requires a 386 or 486 computer with a minimum of 6 megs of RAM and a minimum of 40 megs of free hard disk space. (IBM doesn't have a ROM OS like Atari.) The 21-disk(!) installation takes about an hour, longer if you have to format and partition your hard drive. A README file contains an extensive list of modifications that may be needed by some combinations of computer type and application software. The new OS does not support the 5.25" floppy drive in the IBM PS/2 model 80 and no instructions are given for a fix. A new driver for the floppy was finally located in IBM's CompuServe forum, but with no explanations of how, when, or why to use it. One user's external CD-ROM drive would not work with OS/2 2.0. The fix required installation of a new interface card. That user reports that IBM's free 60-day OS/2 telephone support line was little help, as after two weeks he still hasn't heard back from them.

In summary, it may be of little comfort to know that the 3-way battle for supremacy between IBM, Apple, and Microsoft is creating havoc among users of the world's most widely used home computer systems. But it is a clear and strong indication that dark-horse Atari still has a fighting chance to gain market share with its excellent computers, if it can strike while the opportunity still exists. Let's hope that Atari U.S.A. increases production on its latest models and does enough general media advertising to let the western hemisphere know that it exists for more than playing games.

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| ST Format Magazine (6 months) | \$52.00 |
| ST User Magazine (6 months) | \$49.00 |

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Letters to the Editor

To All Current Notes Readers

In October of 1990, I wrote a letter to the editor that was published in the March 1991 issue of *Current Notes*. This letter covered my frustration with obtaining the current version of *MVG Graphica*, and the eventual act of "software piracy" I resorted to in order to obtain the software.

Here is a more indepth review for new subscribers and those who may not have their copy of the March issue. Readers should keep in mind there is a six-month time span between the time the letter was written and the time it appeared in print. Since I want to try to leave nothing out, this piece will be quite long and I do not want anyone to form an opinion until they have finished reading to the end.

I had purchased a copy of *MVG*, version 1.3, from my local dealer, over two years ago. I still have the receipt in my tax files. The program evolved to 2.00 and Dr. Bob released two modules disks for version 2.0. At the time of the 1.3 purchase, I did not have a need for the software, I was just curious about it. When I received a flyer from WizWorks announcing the 2.0 availability and the new modules disks, I ordered the modules disks and commenced writing letters requesting information on how to upgrade.

The first letter went to WizWorks since they were offering the new version and the modules disks for sale. From magazine articles and flyers I had the distinct impression that there was a close working relationship between WizWorks and Dr. Bob. I assumed that WizWorks would therefore pass on my request to Dr. Bob if WizWorks did not deal with the software upgrade. When I did not receive an answer, I started writing directly to Dr. Bobware. At least two letters to Dr. Bobware and a request on one of the modules disk's registration card went unanswered.

By October of 1990 I was so frustrated and angry I could have spit fire! Unfortunately, Dr. Bobware ended up being the focal point. In addition to the letters to Dr. Bobware, I had written to other vendors requesting product info,

catalogues, etc. Every single one of these requests are still unanswered. The Post Office makes mistakes, but they aren't this bad.

At this point, I conclude Dr. Bobware wasn't concerned enough to answer a letter by mail. I also did not think I should have to purchase a new copy of the software just to get the current version. It wasn't the money (*MVG* is not that expensive), it was the principle. I also had a project I needed to finish, and his software provided the graphics manipulation I wished to accomplish. I decided that if Dr. Bobware did not care enough to answer, even with a postcard, I wouldn't care either. And with a job to finish, I found a way to get a copy of *MVG 2.0*.

It wasn't a particularly smart way to go. Ever try to learn a piece of powerful software with no manual? It's a real pain, and I did not have that kind of time to spend.

Lest some of the readers who pirate regularly think I just don't understand computers that well, this is a description of my system: Mega 4ST w/ math coprocessor, T-16 accelerator board, 340 meg hard drive, Laserjet clone printer, hand scanner, AB plotter, Spectre GCR, and an old TOS 1.0 equipped 1040STFm with a working *PC DITTO II* board running DOS from a 40 meg hard drive.

I figured my letter to the editor would be printed within the next three issues of CN if it was to be printed at all. It wasn't, and since I didn't have the time to waste figuring out the program, I placed a long distance call from north of the Arctic Circle in Alaska to Ohio, and spoke to Dr. Bob personally. I explained the situation up to this point and noted my frustration to him.

I am very happy to report that I now have legitimate copy of *MVG*. Dr. Bob was very understanding, and waived the upgrade fee from 1.3 to 2.0. I was more than willing to still pay the upgrade fee. He mailed the upgrade immediately, and paid for the postage. He has since sent me 2.1, and, when he releases version 3, I will be there to purchase the upgrade. To the best of my knowledge all of our differences have

been ironed out. I have even written him a note informing him of this letter to the editor.

In a letter accompanying the 2.1 update, Dr. Bob expressed the opinion that the letter conveyed the attitude that I was proud of having pirated the software. My concern over the impression Dr. Bob received from the published letter is the reason for this letter.

Quite the opposite is the case. In my case, I believe I made every reasonable effort to obtain a legitimate upgrade from Dr. Bob short of the long distance call prior to copying the software. And for those who think nothing of making long distance calls, you have to consider where I am placing the call from. It's expensive living here. You learn to do a lot of things by mail, and schedule this fact into your daily life. Take electricity, for instance. Look at your last electric bill. I would be surprised if you found it to be over \$.20 per kilowatt hour. The electric rate for me is \$.53 per kilowatt hour.

What I would do to "true" software pirates is not printable in *Current Notes*. By "true" I mean those of you who are not willing to buy the software or pay for updates/upgrades. Programmers are simply trying to make a living, and I am tired of reading how companies are leaving the Atari market because of their software appears on bulletin boards before it appears on dealers' shelves. If you "true" pirates continue, you may find yourselves having to buy a new computer platform in order to obtain new software, unless you plan to steal that also.

If the reader of this is left with any impression, I want it to be known that I do not support, in any way, shape, or manner, the theft of programs available commercially as a means of obtaining the software. I also do not support the use of shareware products without having paid the requested fee. I have paid mine, and there are shareware authors who can attest to that.

Vendors of Atari related products also have to remember they have a responsibility, if not obligation, to owners and potential purchasers of their products to provide timely information and service. It should be no different than if you bought a new car and couldn't get satisfaction from the dealer. I have read where many claim the paperwork involved with mail is simply too time con-

suming and costly. I may be wrong, but I'll bet each vendor receives the same requests the majority of the time when it comes to product information. Develop an informative brochure you can simply pop in an envelope. Or set up a number of macros in your word processor and hire a part time employee to answer these questions. After awhile, the employee will probably become knowledgeable enough to answer some specific questions without help. The secretary where I work answers inquiries this way. When she started doing it this way, her output of replies went from a couple per hour to 15-20 per hour. (Who knows, maybe that employee will go buy his own Atari computer!)

A suggestion to the publishers of Atari periodicals: Do a truly in depth article or series of articles on piracy and copying of software. Is there a time when it could be considered okay? I am thinking of unavailable software from companies that are out of business. *The Graphic Artist* and associated programs from Progressive Computer Applications comes to mind here. (I own a legitimate copy, not pirated.) What about products from companies who have discontinued development and/or support, and the product is unavailable? *Supercharger* from Migraph probably falls into this category. What about programs from a company that has gone out of business and the code for some or all of the company's products have been purchased by other companies, but the new owners are not providing any more copies for sale? *Word Up*, for instance. Neocept is out of business; Atari owns the code, but no new copies or bug fixes are available. (This is not a dig at Atari.)

You could also include shareware upgrades in this vein. Let's say you pay the shareware fee for version 1.0 of DOITALL.PRG. Over time it evolves to version 4.0. You have kept up with the upgrades and are now using 4.0. Should you have, at some time, made an additional payment?

I hope the reader has not been totally bored by this. I just want him/her to realize that I do not support, nor am proud of, the piracy that occurs on any computer platform in order to avoid paying for software.

Ken Springer
Bettles, AK

Atari Italy Helps Out

Dear Mr. Waters,

I wanted to share a recent experience with Atari U.S. and Atari Italy that worked out very well. Living overseas is tough, and having to mail order any new hardware, a nightmare. It takes weeks to get anything, and it seems as if the U.S. Post Office gives everything the "Samsonite Luggage Test" for durability. I recently ordered one of the last STacy's from San Jose Computers, and when it arrived, it looked as though the box had been dropped, smashed and poked. I gingerly opened the box to discover the screen had been pried open on one side and the [Alternate] and left [Shift] keys broken off. The [O] key and left trackball button didn't work either. Something mysteriously rattled around inside, and when I turned it on, there were two thin horizontal lines running the entire width of the top of the screen. After waiting so long, you can be sure I was disappointed, and angry.

After a call to San Jose Computers, the owner suggested we try to get it repaired here in Italy instead of having to send it all the way back to the states, then all the way back to Italy. Atari U.S. agreed that it would be easier to get Atari Italy to take care of the problem rather than send it all the way back to California. Besides, I wasn't feeling very confident in the U.S. Postal Service and didn't want to wait a month only to receive another busted computer. Don Mandale, the General Manager of Atari U.S. contacted Atari Italy to authorize the repair, then I dropped the computer off at my nearby Atari dealer here in Naples. It was sent to Atari Headquarters in Milan, and two weeks later I had it back. I was nervous as I switched it on, but everything was perfect. You could never tell anything had been broken. It's nice to see Atari working with both their dealers and their customers so closely. Without their help, I'd probably still be waiting for my STacy, and who knows what might have happened to it during the trip back? Thanks Atari, and thanks San Jose.

James Parker
6th Fleet Bank
Naples, Italy

Thanks for the 8-Bits

Dear Sirs:

This letter is being sent to several Atari publications simultaneously, in order to thank as large an audience as possible. Several months ago, I began writing and asking for donations of used 8-bit Atari stuff. I'm the chief psychiatrist at a hospital for mentally ill offenders (read "Silence of the Lambs" only real life) and we have a limited budget. Lots of my patients are illiterate, and many are certainly short on job skills.

It has been gratifying to get the response I've had; even more so, I've got several dozen people who are learning to type, wordprocess, and use Print Shop. Not only do they enjoy it, but they are getting taught the way I think people should learn computers. They don't have fancy classes about bytes and bits; they have "what went wrong this time?"

Anyway, those old 8-bits still do a great job, and are serving a wonderful purpose. Thanks to those who gave, and we'll take any more out there.

J. F. Hooper, M.D.
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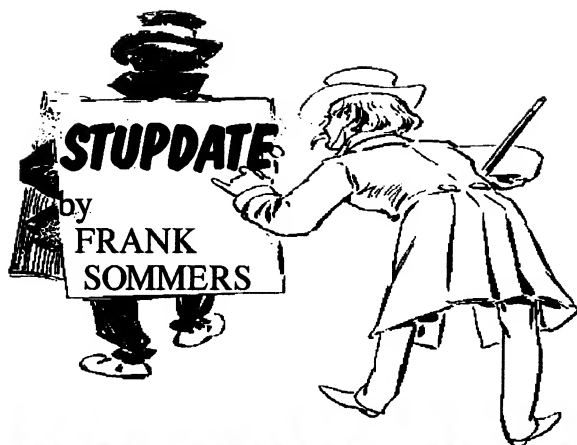
Populous II Revisited

Dear Joe,

I just received my June 1992 issue of *Current Notes* toady and as I glanced at the front cover, I thought to myself, "Great, *Populous II* is on the cover! That must mean a review inside! Maybe a few hints and tips!" As someone who has been playing *Populous II* for several months, I can say I was very disappointed in the review. First and foremost, I think that *Pop II* was designed to sell to all the people who like the original version, and for those people, *Pop II* is an amazing improvement with more and better graphics, sounds, levels, and effects.

As for the trouble Mike Heininger had installing the program on his hard disk, I can say I used the install program and had no difficulties at all. In fact, I had never booted the game from disk until I read about the "scrolling Bullfrog logo" in the review and got curious to see what it looked like. I'll have

(Continued on page 71.)



MILWAUKEE ATARIFEST, GAMES IN U.S., PRICE WARS, TOAD TEACHIES USERS, & NOW IS THE FUTURE?

*ST as a game machine
virtually moribund in U.S.
per Computer Gaming
World....*

The Town Where We Were Born

MAF Milwaukee Atari Fest, was held on 14-15 June in Wauwatosa, Wisconsin, almost in Milwaukee. About 400 people got together at the Bolero Red Carpet Land and checked out, with each other, what was new, what was good, and what they liked best for their Atari machines. Atari had nothing new to show. But Bob Brodie was there, "whatever that means," one visitor commented. He had traveled to the mid-west to see some user groups and a couple of dealers, and stopped in to work the crowd and assure everybody that Atari was "still going to do it" when the new machines arrived. No dates.

Despite the absence of anything new, his presence was much appreciated by the MAF management. CodeHead and Gadgets by Small had come the farthest east and Toad Computers' Dave Troy the farthest west to attend. Small's SST accelerator board was up and running, and CodeHead's new European product, *Calligrapher*, attested to the fact that new word processors for the ST were still possible. Born in Milwaukee, we were sorry to miss it by two weeks, but will have arrived there for a vacation by the time you read this.

Stalking Atari's Stock

Having watched Atari's stock almost daily for the past three years, we thought we were gradually beginning to see a pattern in its perambulations, in addition to its constant decline down to 2. We now conclude that the "buys" that brought it up temporarily whenever it sank a point or two (and lately, after reaching 2, when it sank 1/4 of a point or less) or the "sell-offs" that brought it down again, are rather inexplicable. In the week following the stock holders meeting (see Yerger article and Sam Tramiel's statement to stockholders in this issue) the stock floated still as a whisper, as though it were atop the Dead Sea. One and three quarters per share and not a micron higher or a micron lower all week long. We begin to ask ourselves, "Who trades in this stock? Is it only the family and past and present employees?" Obviously, that can't be. But equally obvious, was that no one is cashing his or hers to buy a new home or a new Ferrari. Then on 17 June 55,000 shares were sold and it sank 1/8th. Check the Atari Sunnyvale parking lot. (Also see Godbey's review of an ST stock plotting program, with charts of Atari stock performance, in this issue.)

Let the Games Begin

Or at least let the games flow in America. As matters now stand, or rest, game producers/developers are almost non-existent for the ST. Developers have gone to other platforms. Europe is where the games are, as you will have noticed by our past reviews and diminution of game reviews in general.

The best golf game for the ST, **Microprose Golf**, isn't distributed in the U.S., but must be ordered from England. The final knell was sounded by **Computer Gaming World** in its June 1992 issue, "In a ten year span (1981-1991), the gaming market has gone from a 16K 8-bit computer to a 1-2 meg 16/32 bit computer with clock speeds now in excess of 20 MHZ. The 8-bit market is moribund (if not outright deceased [Ed. comment: The author obviously doesn't read CN]) and the MS-DOS clones hold a commanding lead in forthcoming titles. The ST has been virtually abandoned in the United States and while the Amiga's superior game and graphics capabilities still hold a loyal following, the MS-DOS machines are where the action is."

The statement about the ST may or may not be excessive, when you consider there are an estimated 50,000 plus ST's spread around the country, and a majority of those that are active play a game a day. But how many of them are buying new games? And there's the rub for the developers who have been forced to other machines to keep eating.

Let the Wars Begin, the Price Wars

Our eyes came to an abrupt halt as we perused a Micro Center ad (3089 Nutley St., Fairfax, VA 22031). The stop sign was, "\$799." For some time we had been comparing ST prices with IBM compatibles, watching the ATARI advantage erode, as price wars amongst the clones intensified. IBM was caught in the fusillade and admitted that part of the drop in its profits was because of clone competition. Compaq was forced to change its management and start a drive to lower its computer prices and begin to compete. In mid-June, Hyundai, the South Korean computer company, announced that its U.S. personal computer subsidiary had formed a new management team and was cutting prices of its entire line by 40%. That same day Compaq introduced 16 new computers and slashed prices on some of its products, its big sellers, by 1/3.

But back to the \$799 stop sign. A clone of any consequence and power? A 386SX running at a speed of 25MHZ with 1 MB of Ram, a VGA color monitor, a 40 MB hard drive, and a 3.5 floppy with DOS 5.0. It looked like enough machine for all but the power users. But a peak under the covers raised some doubts.

Did it have SIMM chip sockets, eight of 'em, so that you could easily expand the memory to 8 MB? "To 8 MB's!" we Mega ST owners shout in unison. Who needs that much? Well, we forget, those MS-Dos users are just crawling out of their dark ages with the arrival of Windows 3.1 or its competitor OS/2 V-2.2. They can now enjoy the equivalent of a Gem desktop. But. The "but" is memory, a lot of it. The \$799 machine would need 4 MB, some say 8 MB, to have Windows perform properly. And memory costs money, even in the MS-Dos clone world.

And where is Atari in all of this? Well, certainly not in the forefront of the ad campaigns to chant loudly about the cascading costs. Yet, if you package a \$379 STe with 1 MB of memory with a \$339 color monitor, plus a \$489 50 MB hard drive, you'll have almost the same computing power. Or get a Mega STe, by adding \$60. Wow! At a total cost of \$1200-\$1260, you say. Yes, but remember you have the equivalent of Windows with your Gem desktop and you don't have to pay \$500-\$800 to get your 386SX up 4-8 MB to let Windows strut its stuff.

Admittedly, the above machines, in both categories, are "last year's" models. The latest clones, the 486DX machines get you up to \$1800 and a bit beyond at the best of their street prices. And Atari? This leads us to the late fall, when the Falcon purportedly, "will fly." Pricing at this point is only guess-work, but if you use the above guide lines, Atari will have to join the ranks of the cost-cutters, if it hopes to gain even a minor part of the market.

Toad Does It Again

Some readers may remember last year when we waved our hat at Toad Computers in Annapolis, MD and their mighty band of three, Jennifer, Ray, & Dave. They had produced a catalogue of their products that was exemplary for the amount of information and understanding it provided about what was available to Atari users. Now, in their Spring-Summer catalogue they have again surpassed themselves. If you are in the market for something, or even if you're not, but just want to know more about emulators, accelerators, new advanced desktop publishing tools and 50-odd pages of edifying stuff about what these items will do for you, get them to send you one. (See Toad ad for address and phone number.)

The Future

Apple's new Newton computer (see specs in this issue) would suggest that the future of computing is here. It may be, if you look at Synaptics' "Human Brain Chip." The small company in San Jose has taken the principles of neural networks and incorporated them onto a chip one-fifth of an inch on each side. So what, you ask? If you've heard of the power of parallel processing in the super computers, i.e. then you may be able to perceive what it means to process information simultaneously on 20,000 microscopic components inside this minuscule human brain chip. They say it means a neural network that will run household robots with "thoughts" of their own, cars without drivers and a megaphone you speak into and the other end broadcasts your words to your audience in any language you choose. Yes, that's the future, and it's just about now.

Atari Stockholders Meeting

2 June 1992

by Bill Yerger

This year the Atari stockholder meeting was held at 1196 Borregas, Atari's main corporate headquarters in Sunnyvale. The board of directors in attendance were Steve Kawalik, secretary; Jack Tramiel, chairman of the board; Michael Rosenberg, director; August Ligouri, director and chief financial officer; and Sam Tramiel, chief executive officer and president.

The \$ Numbers

The first part of the meeting is usually pretty much a rubber stamp of approval of the existing executives and ratifying Deloitte and Touche as Atari's auditors of record. As many of you may know, Atari is nominally a public corporation, but in reality the company is run by the Tramiels: Jack 63, his offspring, Sam, Leonard, and Garry, who own about 45% of Atari, which along with Time-Warner's proxy for 24.7% of the company gives the Tramiels 70% of the voting stock.

Sam is Atari's spokesperson and began the annual report with an apology to stockholders concerning 1991's income. (The text of Sam's report is provided on page 11.) Recently, the San Francisco Chronicle reported Atari lost \$33 million in 1991, and \$13 million in the first quarter of 1992. But due to figure shuffling and special credits, Atari's official 10k report doesn't look that bad. In fact, it shows a \$25.6 million profit. What is clear is that Atari's overall sales are down from \$411 million in 1990 to \$258 million in 1991, a 37% decline in sales. This is with an 80% increase in Lynx sales.

Plants, New & Old

One of the big things that kept Atari alive and kicking in 1991 was the \$460 million sale of their 20-acre plant in Taiwan. According to Sam Tramiel, this was actually more a land deal than a plant sale. Taipei grew around the plant and the value of the land increased tenfold. What was Atari's plant is now a group of apartment houses, and Atari is free to subcontract their manufacturing to the lowest bidder.

Sanyo, Phillips (Magnavox), Goldstar, and others are likely manufacturers and assemblers. Atari is considering opening a plant again. One proposed plant was aborted several years ago in Texas, another was proposed in Sunnyvale, but prohibited because of new zoning laws for the location intended. This may seem ironic since Atari began production in Sunnyvale in 1971 and continued producing the majority of its computers there until Warner Communications (now Time-Warner) began Taiwanese production in 1982.

Statistics

Some interesting facts reported by Atari are that ST sales have declined from 59% of the company's sales to 53%; total computer sales were 69% of Atari's business; video game sales are up from 21% in 1990 to 34% in 1991; international

sales are 86% of Atari's total, down from 89%; and there are 507 people in the world working for Atari.

After rubber stamping the election of the board and auditors, Sam gave a general report on Atari's position and plans. First, the Lynx is doing well and is expected to improve. Currently there are 44 titles available, a total of 75 to be ready by Christmas. Due to the Nintendo lawsuit, which has been going on for two years (which, incidentally, Atari won no damages on), Nintendo has given up some of its monopolistic practices.

Advertising

On June 19th Atari begins an American advertising campaign with a free *Batman Returns* Lynx cartridge for every Lynx sold. In this same vein, Atari is hard at work developing the Jaguar, a 64-bit game machine slated for release, 2nd quarter, 1993. This will be a color game machine that will include a custom digital signal processor, 10 numeric digits and three fire buttons. Sam Tramiel feels it will leapfrog current 32-bit technology from Nintendo, Sega, and NEC.

High Performance Falcon

Of more interest to computer buffs is the announced release of the Falcon 030 and Falcon 040. These are expected to be high performance niche machines designed for music, communications, education, and entertainment. Perhaps even better would be to contract Newtek, JRI, and Lexicor to develop a multi-media kit like the Video-Toaster and aim directly for the movie and animation markets.

The only significant new feature that Sam Tramiel spoke of for the new machines is a 56000 digital signal processor. This means fast manipulation of sound and visual data in the same form that they are recorded on digital tape and on compact discs as well as CD-ROM.

These machines are supposed to be released in October and November. (How likely is this? I'd say very likely because Atari has been losing its main market, Germany. When the U.S. will see these products is up to the FCC. This agency has long been Atari's nemesis, e.g. to date the TT has not been sold in class "B" form to my knowledge.)

The Vanishing U.S. Market

Atari acknowledges that they have essentially lost the U.S. market. The PC line has been discontinued in this country. Recently, Don Mandel, VP of sales, resigned, and Alwin Stumpf has been demoted from head of worldwide sales to general manager of Germany, his position prior to mid 1991. When he began to work with Atari's worldwide sales, Germany's sales declined and it became necessary for him to return to Atari GMBH to try and re-establish Atari in the market there.

Atari plans "to kill the Mac and IBM clones" with the pricing and performance of the Falcon 030. As yet the graphics it will support have not been released to the press. But we can expect it to use the ST operating system or an upgrade thereof and run a significant majority of the reported 8,000 ST and TT programs now in existence.

Sam Tramiel Reports to Atari Shareholders

After lengthy consideration, I decided to present this year's message to you in a direct, straight-forward way. I am quite displeased with the company's 1991 results, and hope that this message accurately conveys my dissatisfaction, and the corrective actions we have implemented.

Net sales were down from \$411 million in 1990 to \$258 million in 1991. This represents a 37% sales decline. While the computer industry, as a whole, experienced a fall off, I do not believe it justified our poor performance or alleviated me of any blame. As Chief Executive Officer, it would be hypercritical of me to discuss sales or operational shortcomings in the third party. My desk is where the buck stops, and it is also the place where corrections and positive alternatives emanate. Please be assured that new directions are now in place.

At the outset of 1991, we recognized that major competitive market changes would negatively affect Atari's sales and profits for the year. In anticipation of these competitive actions, we began to reduce our costs. Measures were taken to carefully monitor worldwide inventories. As the year drew to a close, the results of our efforts had begun to appear.

Inventory was \$81 million for 1991 versus \$114 million a year earlier. The 29% reduction of inventory is a step in the right direction, but we still plan to reduce inventory levels further.

In addition to these corrective measures, our advertising programs were refocused to target specific audiences and reduce costs associated with broad based promotions. Research and development projects were redefined as well and are now focused on high volume production.

Although our company is continuing to go through a difficult period, the past year was not totally bleak. There were a number of positive highlights. Combining an advantageous real estate market, our reduced 1991 production requirements, and our long range plans, we sold our Taiwanese manufacturing facility and realized a gain of \$40.9 million. This transaction significantly strengthened our balance sheet. We improved our cash position, reduced debt and increased shareholder's equity. The usual start-up problems were encountered in our move to independent subcontractors, however, these problems, for the most part, are behind us.

As I noted in my message last year, we reduced the retail price of the Lynx to \$99. As anticipated, unit sales increased over 1990 by 80%. This increase, together with the 42 software titles now available, is positioning this product as a major contender in the portable category. For the upcoming Christmas market we will have about 75 titles. In a number of countries throughout Eu-

rope and in the U.S., we introduced new advertisements and T.V. commercials during the 4th Quarter. These new consumer messages proved successful and will be carried forward in 1992. Our software development continues to be strong and we are licensing some major titles, such as *Batman Returns*.

As we previously stated, for the last few years we have been involved in a lawsuit against Nintendo, alleging violations of anti-trust and monopolistic practices. The trial finally commenced in February 1992, and continued until April 27, 1992. The jury could not decide two of the three claims so the court granted a mistrial on those two claims. Considerable effort, management time, and money have been involved in the presentation of our case. As post trial motions are still being considered, we are unable to comment further.

A great deal of attention was focused on research and development throughout 1991. In our opinion, this research will result in the leapfrog development of a highly advanced family of personal computers. These new systems are compatible with our flagship ST computers and will use TOS (The Operating System) which has been refined for this family.

We have combined advanced technology in the areas of video, audio, speed and versatility, in order to have a line of computers that will offer consumers exceptional power at very competitive prices. We expect to reap the benefits of this design for years to come. On the video game front we are developing an advanced console which will have superb video and audio capabilities. This product is now being debugged and is code named "Jaguar." I am very excited about this platform, and I feel it will mature into a very successful video game system.

The financial statement that follows is not our usual, full color annual report. Instead, you will find a reproduction of our Form 10-K. I will apologize for its frugal appearance, but not for the money we have saved.

Atari is building for the future. Our marketplace is worldwide, and I believe that the many economies throughout this extensive area are recovering for the recessions that have continued to plague sales efforts. With the inception of our advanced products on the horizon, we are positioning ourselves to aggressively increase our global presence.

1991 was a challenging year. Because of the changes, progress, and developments that we accomplished, I am very optimistic about Atari's present strength and its future in the world marketplace. As I look forward to the year ahead, I would like to thank our shareholders, suppliers, employees, customers and end-users for their continued support.

[Reprinted from ST Report #822 (5/29/92).]

TT Programs

During the meeting, a quick demonstration was given by James Grunke displaying *Cubase* running on a TT. He said *Cubase* is currently the only program written for the TT. He most likely meant the only music program, as I am sure that *Calamus SL* and *Pagestream 2.01+* are written for the TT, and rather certain that *First Word Plus 3.2*, *WordFlair II*, and *Retouche* are written to run on the TT. I also have seen *Notator* running on the TT in Germany. However, C-Lab's *Notator* may have been a prototype.

At this time Grunke estimates Atari to be 17% of the music market, behind Mac and IBM compatibles. Atari's market share is healthy but declining in this area. The fact that *Cubase* for the Mac is gaining steam does not bode well. But Hybrid Arts digital mastering hard disk recording system at about \$5,000 is by far the best in its price range and even compares well with \$200,000 systems.

Better \$Numbers In '93

Because of this and Atari's continuing sales internationally, it looks as if Atari will be here for some time to come. As Atari users we are beginning to develop a siege mentality. There will be a future and it need not be bleak. The big questions, however, remain. Will Atari produce a marketable product again and will they properly market it? If both of these are not done, Atari will continue to decline as it has since October, 1988. Sam Tramiel predicted that we will see some pick up in sales after September and some very good figures in 1993.

Ask Atari

At this point the meeting was adjourned via parliamentary procedure. Sam Tramiel then called for questions. One person wanted to know what *Cubase* did. For those who don't know, *Cubase* and *Notator* are sequencing, scoring, and printing programs for music composition. One can play music into the computer with any MIDI compatible digital source such as a keyboard, and it will become notes on a score which can be edited, manipulated, played out or digitally or analogly recorded to tape or other digital destination. This music can also be printed on paper or film and can be synchronized with moving pictures via SMPTE track recording.

Another question was from a woman whose family owns five ST's and loves them. She wanted to know why Atari doesn't push the ST through the schools as Apple has and also why there are no ads and so few dealers. Sam's answer is that the ST can no longer compete in terms of graphics and price with IBM compatibles. For this reason Atari is aiming for music departments at schools. Atari always wants to make at least 50% profit, and this is difficult to do in the current consumer-driven price war climate. Of course, many of us remember that Atari drew the sword first with its "Power without the price!" slogan. That slogan has been obsolete since 1989 when Atari began its change in focus.

How Much Am I Bid?

One stockholder offered several questions about Atari's profitability. One of these was whether Atari could be bought

out and, if so, how much is Atari worth. Sam said everything has its price, and while Atari is worth \$115 million, he would not comment on its current selling price. He did say there is no poison pill preventing the sale of Atari Corporation.

Currently, Atari stock is at 1 3/4. In the first quarter of 1990 its high was 9 5/8. Atari's stock went down to 2 1/2 in the third quarter, and 1 3/4 in the fourth quarter. In 1991 it hit a high in the first quarter of 3 3/8, and a low in the fourth quarter of 1 3/8. Needless to say, it is not considered a stock to rocket to success on, or even make a good living with. There are no dividends, and the only prediction that seems likely at this time is that Atari stock will remain low for some time to come.

I asked Sam if the SM147 is a permanent addition to the Atari pantheon of products, feeling that the SM147 is the first clearly inferior product Atari put on the market. Sam said the SM147 monochrome monitor was a stopgap temporary product that is to be replaced with VGA monitors for the Falcon 030 and 040. (Incidentally, the Falcon 030 was originally called the Sparrow. These products may or may not have these names when they make it to market.) Also, with FCC approval being necessary, the American market may have to limp along for a long time before any new plateau is achieved for TOS.

The Tramiels

After the questions, attendees were free to look at the two TT's and a small Lynx kiosk showing the machines and all the new games. Jack and Leonard Tramiel came over and we exchanged a few pleasantries. The Tramiels are all such pleasant and intelligent people it's hard to understand why they have not been able to repeat their success with Commodore. Jack's answer would be that it was a different market. Profits were better and competition was less. Jack was casually dressed, and most attendees, while well dressed, were clearly employees of Atari, having a legitimate afternoon off.

The User, The One That Counts

Let users and dealers alike hope for a turn around of Atari's fortunes. Let us also hope that Atari realizes that all people in the supply chain work for the customer, the end-user. Dealers are apparently who Sam thinks of as his customers. If so, Atari is some distance from creating satisfaction in their ranks. The real customer is the person using the machine. The one with the money, who wants to be happy with his or her purchase, the one who expects software and dealer support. If Atari meets his/her needs at the best price and actively promote the line, then, we submit, success will chase Atari, rather than vice versa.

What do dealers want? They want the 68030 Falcon with 4 megs of upgradeable RAM, 120 meg hard drive available to any dealers who will buy 2 at a time for \$850 with 1024x768 VGA output and 3 bus ports. And the 68040 for \$1200 configured the same way. Ridiculous? that's what they pay for 386/33's and 486/33's without monitor, and they are easier to sell. Here's to more powerful Atari's and better sales in '93!

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| <input type="checkbox"/> Calamus 1.09N | \$159.99 |
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| <input type="checkbox"/> PageStream 2.1 | \$159.99 |
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| <input type="checkbox"/> Hand Scanner & Touch-Up | \$250.00 |
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Productivity

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| <input type="checkbox"/> Code Keys | \$27.99 |
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| <input type="checkbox"/> Word Flair II | \$89.99 |
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| <input type="checkbox"/> Forecaster III | \$19.99 |
| <input type="checkbox"/> Stalk The Market | \$59.99 |
| <input type="checkbox"/> E Z Grade | \$45.99 |

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| <input checked="" type="checkbox"/> SC 1435 Color Monitor | \$299.99 |
| <input type="checkbox"/> Mega StE | \$599.99 |
| <input type="checkbox"/> 2 Mega StE w/50 Mb HD Drive | \$899.99 |
| <input checked="" type="checkbox"/> 4 Mega StE w/50 Mb HD Drive | \$999.99 |
| <input checked="" type="checkbox"/> 1 Mb Simm for StE | \$35.00 |
| <input type="checkbox"/> RS232C or Centronics cable | \$9.99 |
| <input type="checkbox"/> Master Double Sided Drive | \$139.99 |
| <input type="checkbox"/> Supra 44 Mb Cart HD Drive | \$599.99 |
| <input type="checkbox"/> 44 Mb Cart | \$69.99 |
| <input type="checkbox"/> Supra 50 Mb Hard Drive | \$399.00 |
| <input type="checkbox"/> Supra 120 Mb Hard Drive | \$559.99 |
| <input type="checkbox"/> Supra 2400B Modem | \$85.00 |
| <input type="checkbox"/> Toner Cart for 804LP | \$49.99 |

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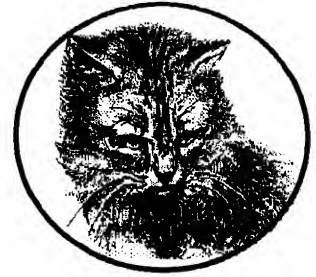
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Who Speaks for the Users?



A recent *ST Report* story on the virtual demise of the Atari Users' Association once again caused the Junkyard Pussycat to wonder how the Atari user community could best make its voice heard.

A Free Press

In the First Amendment to the United States Constitution the Founding Fathers of our nation provided special protection for those would openly speak their minds. Over the years this guarantee has had special meaning for the press in that it has been construed to protect diligent journalists who seek to inform people and illuminate the issues of the day.

This has always been a source of discomfort to vested interests. Free market journalistic enterprise has, however, been tempered by commercialism arising from the fact that the news must be sold to those with a bit of pocket change. The purchasers are free to choose their sources.

This forces those who write about events, products, and people to walk a fine line between pandering to their readers and informing them, especially if the latter risks irritating the customers.

Independent publications like *Current Notes* have always provided considerable leeway to their reporters, reviewers, and commentators in the belief that the community benefits most when censorship is least.

Every now and then one publisher or another receives a letter from a reader demanding a refund on the unexpired portion of his subscription because someone has spoken in a way that the reader does not like. Such letters are a warning flag to publishers because they indicate that some readers are not finding enough interesting and useful content to offset the stuff that offends them. The publishers face a hard choice between kowtowing to sentiment and renewing their diligence in ferreting out facts and evaluating products to produce other material that will hold their readers' interest.

Publications that depend heavily on commercials to keep subscription costs low must tailor their content to avoid offending advertisers, while still providing enough real content to titillate the readers.

While the constraints on individual writers and columnists are less severe, these people sometimes have other, hidden, interests. They must, therefore,

slant their coverage so as not to lose their access or to injure their friends.

Some publications in the Macintosh and MS-DOS worlds reach hundreds of thousands of subscribers. This gives them the clout to demand cooperation in the evaluation of products. It allows them to pay for the personnel and lab resources to do the work effectively. They can afford to hire real professionals to do their writing.

No publication in the Atari world is this well supported, with the result that none of them really has the means to make consumer advocacy its main watchword.

Corporate Information Management

"Public Relations" is an enterprise that enjoys special standing by providing corporate interests with techniques for projecting their images and their products. The capitalist system allows entrepreneurs all of the access that they can pay for. Activities like in-house publications, public news forums, trade expositions, trade associations, lobbying, and the courting of influential outside spokespersons are all a part of the mix.

Atari Corporation is no exception. It publishes *Atari Explorer Magazine*, it receives income for its support of the Atari Roundtables on GENie, and it sponsors the IAAD (Independent Association of Atari Developers). The recent corporate sponsored shows in Glendale, Chicago, and Toronto are additional examples of public outreach activities.

Technical support for Atari's developer community, while not strictly a public relations activity, is another essential form of communication.

Within this matrix of endeavors there are many boundaries between permissible practices and corrupt ones. Information can be replaced by disinformation and publicity designed to inform can be replaced by propaganda designed to influence. Access to corporate spokespeople can be controlled and outsiders can be bribed with favors. Corporate officials can seek to defame those they view as troublemakers.

The relocation of *Atari Explorer* magazine from the east coast to the west coast coupled with a reformatting of the *Z-Net* news service into an arm of *Atari Explorer* is simply the most recent and most visible manifestation of a pattern in which Atari Corpo-

ration appears to be attempting to centralize control over the flow of information and discussion.

Bob Brodie's founding, presumably with corporate approval, of a node on the F-Net and subsequent attempts to remove *ST Reports* from access to F-Net services is another example of information control run amok.

Attempts to force show sponsors to blacklist certain individuals represent a bold march across the boundary between propriety and corruption.

Even developers are subject to the carrot and stick approach when pre-release software and hardware is parcelled out in a pecking order that places a favored few ahead of others.

Those who witnessed Watergate, Iran-contra, and other scandals of recent times know a coverup when they see it. When some employees leave through the revolving door and others hawk their programs for shareware contributions, it becomes clear that Atari is too busy with spin control, leak plugging, and damage limitation to pay heed to the consumer.

The Electronic Media

The online services represent one forum where the consumer can ask questions or exchange views with minimal fear of censorship. Even the GENie Atari Roundtables, while they are subject to pressure from Atari, will normally avoid outright censorship. The "topic Police" sometimes relegate objectionable discourse to special message areas.

This is less of a factor on CompuServe. More of its participants are professionals who choose to spend their time there because they want contact with others of their own kind. Besides, the computer forums are pretty expensive.

Delphi hardly matters. The place is like a tiny village in which everyone knows everyone else.

In all of the forums, individuals who focus on unpleasant truths or who espouse politically incorrect viewpoints may find themselves set upon by truth squads of outraged users or developers. Bob Brodie or some other corporate representative may weigh in to deal with particular brush fires. The result can be entertaining, if not necessarily illuminating.

When the occasional genuine consumer issue does receive an airing on these services, someone soon pipes up to point out how Atari's past history has demonstrated the futility of such tilting at windmills, and the furor soon dies away. Some of the better causes do receive politely phrased assurances that Atari will do something about the problem "Real Soon Now."

While the Sysops of these services are uniformly good people it must be recognized that they, too, are bound by obligations to their sponsors. They counteract attempts at censorship because they recognize that its practice would doom them. They deal with breaches of good manners in the interest of civility.

Through it all, however, they are subject to the same pressures as the magazine publishers. They must strive to maximize revenues by striking a balance between controversy, education, and entertainment.

Third Party Vendors

People who sell products related to the main line in a particular marketplace also have a need to respond to consumers who are, after all, the ultimate purchasers of their products.

The conflict between moving (perhaps slightly flawed) inventory off the shelves and ensuring that the consumer receives the best possible value has been with us since the first merchant set out his wares on the streets of ancient Babylon.

In order to gain access to information that they need to make business decisions modern merchants must sign non-disclosure agreements that are designed to protect the legitimate interests of their suppliers. This prevents them from being completely candid with consumers.

Likewise the merchants sometimes find themselves with inventory that, contrary to their best intentions, fails to perform in some obscure way. The best merchants will try to resolve these problems with their suppliers and they will attempt to satisfy consumers who have been wronged. Such processes are, however, always painful and the temptation to simply overlook the damage is sometimes overwhelming.

In the Atari marketplace the distinction between merchant and consumer sometimes gets blurred as users become part-time dealers or software developers. Such mom and pop enterprises sometimes need the cash flow from early sales to build a position that affords them the strength to make improvements.

Atari has been known to play games with software developers and dealers. Some of those who speak out are blacklisted for alleged violations of their non-disclosure agreements. Others find that their telephone calls for technical support do not get returned. Access to prerelease hardware becomes difficult. Some dealers enjoy better access to product than do others. The boundary between Atari's self-interest and corruption in cases like these is difficult to pin down, but it is clear that third parties are under terrific pressure to play along with the corporation.

Those third parties who have the strength to go their own way usually do so, sometimes dropping the Atari market altogether in favor of more lucrative pursuits. Word Perfect Corporation is one good example, there are surely others.

With all of these pressures to conform it is simply not reasonable to ask third parties to take a strong public stance on the side of the consumer. Their actions behind the scenes may be another matter, but these remain shrouded in mystery.

User Groups

One would think that user groups should be the ultimate consumer advocates. Many of them are, but others are not because their leaders pursue distorted agendas. These people believe that they can serve their members best by playing along with Atari in much the same fashion as the dealers and developers do. Some user groups are little more than adjuncts to dealerships.

Even when there is no direct commercial link, chauvinism often rears its ugly head to prevent collaboration among user groups. The Atari scene is replete with cases in which user groups in small areas do not cooperate with one another because of unsatisfied grievances. This kind of Balkanism is every bit as objectionable as that in Yugoslavia.

If local chauvinism is not a factor then local pride often leads groups to promote themselves at the expense of others. The chaos in scheduling of user group shows is one good example. Every group in the country seems to feel equally entitled to a right to sponsor an event that will bring in the entire developer community. If this tendency were given free rein the developers would have no time to work on their products and they would use up all of their cash for traveling.

Unless the user groups can be welded together into an entity that represents the interest of the entire community they will continue to be ineffective in representing the Atari consumer.

The Consumers Themselves

Users do have outlets for their individual grievances through letters to the editor or postings on the online services. Each of these events is, however, an individual act and there is usually no one to follow through.

Those who plead for an end to "Atari Bashing" in their posting deserve special mention. The Pussycat finds the idea that Atari will do just fine if people just cut the kibitzing to be a puzzling abdication of enlightened self interest.

Atari has arrived at its present state while consistently ignoring the kibitzers, thus pointing up the weakness of the apologists' logic. On the other hand, Atari's vigorous actions to shunt selected kibitzers aside demonstrates that someone is listening, even if he is hearing the wrong message.

It is easy to sympathize with those who are disappointed when they open a magazine or log onto a BBS and suddenly find themselves greeted by questions or comments critical of Atari, its dealers, or its developers. Such users, unless they are exceptionally mature, may begin to doubt their wisdom in purchasing an Atari machine or some piece of software.

Some of this so-called "flaming" is coached in pretty vigorous terms, occasionally bordering on the

obscene. The abject apologia issued by the truth squads in response to the flames are often equally devoid of redeeming social value. Meanwhile, the pennies and the minutes are floating away, never to be seen again. The real pain may not be experienced until the next month's charge card statement.

Since many of these people are "lurkers," whose role in life is to read others' messages and download software, their presence goes unnoted until the activists goad them into responding and they gush forth with their tales of love for Atari and all its wares.

A few visits to other forums and other media make it clear that these are common responses in the computer world. Perhaps our consumers are so close to their high school days that they feel a need to cheer on the home team.

If one can presume to filter a single message out of all the cacophony it would be that the consumer needs accurate, reliable information to guide his purchasing decisions and to solve the problems he is encountering in the use of his high-tech appliances.

The voices are, however, fragmented and indistinct.

In Unity Lies Strength

This maxim has appeared in many forms throughout human history. It was the guiding force in bringing forth the Atari Users' Association. Unfortunately, this organization lacked the vision and the means to achieve the success its founders craved.

The situation in 1992 is different from that of 1990 because Atari's emerging product, by evolving beyond the confines of the 68000 architecture, will challenge the user base even more. Current customers will need a great deal of education if they are to make wise decisions about staying put, upgrading, or jumping ship.

What are the real capabilities of the new products? What software breaks in the new environments? What upgrades to old equipment make sense in the light of the speed and other capabilities offered by the new products? How will new software be better than the old?

Given the past history of slipped shipping dates, vendor hype, and end-user disappointment in these areas there is a serious need for hard-nosed technical evaluation.

A unified user organization could also be a great help in organizing shows to introduce Atari users to one another, to the developer community, and to new products. These shows appear to be a really important channel between developers and their customers.

This is an area in which Atari has limited resources. Their commitments to large scale industry events such as Comdex, CES, NAMM, and others leave little in the way of resources for preaching to the already converted. Atari has to expend its efforts on

reaching out to new buyers. Likewise, as the World of Atari shows demonstrated, there is not enough profit in Atari shows to attract commercial organizers.

Certain users groups have established a solid track record in promoting these events, but those who have been left out have good reason to feel slighted. By offering a broader base of talent and experience in organizing such events and by offering more financial muscle than any one group can put together, a unified organization could rise above local chauvinism.

By using a planning horizon that extends 18 months to two years into the future the unified organization could ensure that everyone's needs are serviced on a reasonable timetable. The current system seems to compel everyone to do something annually in order to keep their place in line. Each group also seems to feel compelled to hype their show, thereby confusing the consumer.

Finally, the users need to influence the pace of the hardware and software evolution if it is not to leave them hopelessly stranded. Focus groups might be a useful tool for exploring new capabilities. Technically sophisticated users, of whom there are a great many, could combine their efforts to set specifications for things like networking and multitasking. Priorities will need to be set to ensure timely software modifications. The bugs that invariably survive the pre-release testing will have to be found and exterminated.

The list given above merely scratches the surface with regard to missions that an energetic organization enjoying broad user support could accomplish given modest reserves of creativity, talent, and cash.

What Is Needed?

An earlier proposal of mine for an organization modelled along the lines of DECUS, the highly successful organization for users of Digital Equipment Corporation products, assumed that the user community and Atari Corporation could arrive at a meaningful definition of mutually enlightened self-interest.

It appears that the time for this has passed. Atari does not have the resources to put into it. If it is to be done the users will have to do it on their own.

The first requirement is for a leader with the charisma, persistence, and the means to nucleate such an undertaking. Maturity, experience, intellect, integrity, and diplomacy are also called for.

Followership seems to be a scarce commodity these days, but it is the crucial second requirement. If the unified organization is to have any visibility it must have a great many committed members. A number on the order of 10,000 might be enough to ensure financial viability in the startup phase. This is not an unreasonable number in the light of the enrollment in the online services and the subscriber base of the national Atari magazines. Annual dues would be rather modest on top of these expenses.

Of course, there are many more details that would have to be thrashed out to create the structure for such an organization and to will it into being, but these things are routine for the kind of the leader that the Pussycat has described. Unfortunately, anyone with the necessary qualities could quickly land a better job at 1600 Pennsylvania Avenue or in the United States Senate.

Any of the Pussycat's readers who have gotten to this point will know him well enough to sense the sickness in his heart at the futility of it all. Even in the halcyon days of the Atari 800, when users were packing halls all over the land, our community lacked the vision and enterprise needed to bring off anything of this sort. A few meetings were held, only to break up amid the rubble of rivalries and mismatched agendas. Those who have tried in the interim have been frustrated by a lack of support and their own incapacity for the job at hand.

One hopes that others, more knowing in the ways of the community, can recruit the instrument of our salvation. Until then, we can only wait, watch, and wonder.

■ ■ ■ ■ ■

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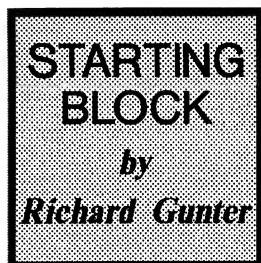
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Calamus

...Being a Compendium of Observations
by a Calamus Beginner.



There's no denying that *Calamus* makes an intimidating first impression. (See illustration of main screen). This program is icon-heavy. The four leftmost icons on the top row cause new sets of icons to appear in the vertical menu box at the left of the screen. The four icons at the top of the menu box (starting with the wrench-like symbol) also change the icon menu.

After receiving a copy of *Calamus 1.09N*, I delayed diving into it for awhile, partly because I wasn't sure how much learning time would be required. About a month ago, I found it necessary to take some leave, and used that time to force a relationship with *Calamus*. I didn't keep records (sorry about that), but I'd estimate 20 to 30 hours reading the manuals, working with the tutorials, and experimenting on my own. At the end of that time, I felt pretty comfortable with the program.

My experience may not be typical. First of all, I'm a professional programmer (computer literate, y'see). Second, I was already reasonably proficient with *Publisher ST*. Third, Joe Waters provided one of my articles set up in *Calamus* format, which, tutorially, proved to be a big help.

My *Calamus* package consisted of the following items: the reference manual and disks, and a second book (*The Guide to Calamus Desktop Publishing* by Bonnie Robinson). With the manual came a 32-page insert containing a tutorial, and the "Guide" contains an extensive tutorial.

Get the "Guide" Book

The Guide to Calamus Desktop Publishing is a must. It's slightly out of date with respect to *Calamus 1.09N*, but most of the differences are pretty obvious, and the reference manual is sketchy. The "Guide" supplements it well.

Do the Tutorials!

Having that sample did not eliminate the need to do all the tutorials. Take the time; it's worth it.

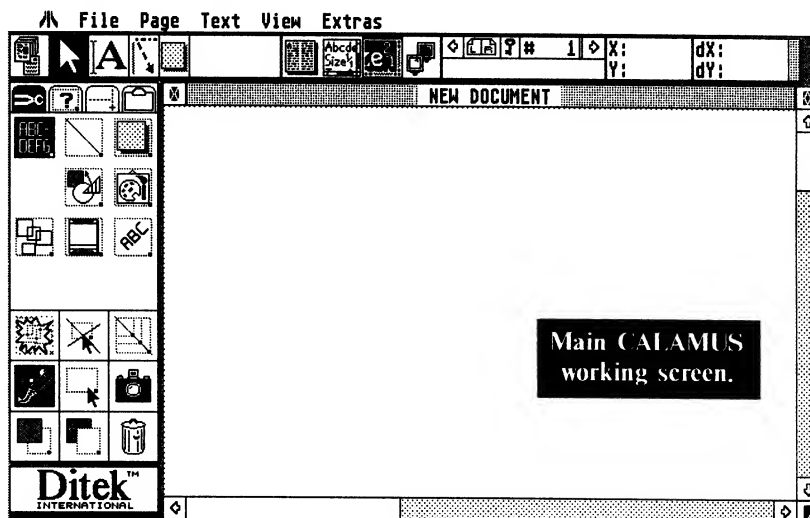
I worked the tutorial that came as an insert to the manual before the one in the "Guide." The former is a fairly short one that helps with the installation and

setup process, while the latter assumes you've already installed the program on your hard drive.

Practice, Practice!

Having worked both tutorials, you should be ready to try a simple document on your own. Naturally, you should stick to document elements and techniques treated in the tutorials at first.

The following is a list of things I learned while doing my first *Calamus* documents. They are in no par-



ticular order, and represent tips, quirks or maybe even outright bugs (with workarounds).

Layout First

Calamus, like many DTP programs, uses the concept of a "frame," a box you draw on the page and in which you place text, graphics, etc. As with most DTP programs, it's best to write your text externally (I use *Word Perfect* for this).

Flowing a text file into a set of *Calamus* frames is easiest if you draw all the text frames you expect to use prior to importing the text file, i.e., do most of your document layout first.

After drawing the frames, you specify the "piping chain," which is nothing more than telling *Calamus* the order in which text should be automatically poured into the frames. Other methods are possible, but specifying the basic page layout up front is less troublesome. It's also essential if you have "left" and "right" pages in your layout.

Help Lines and Frame Jitter

I'm working with a Mega 2/4 with TOS 1.4, and no mouse fix program. As a result, when I select a frame, it sometimes gets "jiggled," or displaced slightly, from its intended location. To counter this effect, I draw "help" lines bordering all my frames (once I know where I really want everything to be). Then I turn on the "snap to lines" options, which force the frames to align with the nearest help lines. This nails the frames exactly where I want them, and the mouse jitter effect is prevented.

Even if you don't have this problem, I recommend help lines for precise control over frame placement.

Piping Controls Simplified

The discussion of piping in the "Guide" is a little confusing and seems to be at variance with the behavior of *Calamus 1.09N*. I've had no difficulty with using only a few controls for piping: pipe from frame to frame, delete frame from piping chain, and insert into chain seem to pretty much do everything I need. The rest of the options seem to be an unnecessary complication.

Limit Text Ruler Usage

I'd been experimenting with using a whole bunch of text rulers, and was having trouble with that approach. Joe's method (one text ruler for the body of the document) seems to work a lot better. With only one text ruler, it's far easier to propagate a change through the document. With a lot of rulers, you must edit each one—a nuisance.

Joe also told me that he'd found absolute line spacing to work better than relative spacing; he said the tall letters and descenders seemed to come out better. I've noticed that alignment of text lines across columns is pretty natural with absolute spacing.

This article shows both principles in action; there's one ruler specifying 12 points between lines and paragraphs. This paragraph and the previous one are separated by a single [RETURN], while the extra spacing between paragraphs and subheads is accomplished by two [RETURN]s. Indentation (tabbing) gives visual separation between paragraphs within a subheading.

I do use more rulers in a presentation chart, but such pages are short, and their layout can vary a bit.

On Saving Layouts

Calamus allows you to save page layout information for later use. This feature was described as the answer to other programs' style sheet capability. I haven't found saving a layout to buy me much of anything. If I expect to reuse a layout (such as the basic layout for these articles), I make a copy of the document, strip it of all text and graphics, delete all but the minimum

number of pages (in this case two), and save the document with a standard name. This saves everything I could want, including fonts loaded, margin settings, and frame definitions. Later, I can just load the standard document and go on about my business.

Header/Footer Frames

Only one header/footer frame is allowed in *Calamus*; however, you can group multiple frames into one. The header/footer frame is automatically propagated to subsequent pages as you add these. If you have "left" and "right" pages with different layouts, DON'T specify "COPY LAYOUT FROM PAGE" in that dialog box! You won't get the right header/footer frame on the new page. Leave the button unselected (not highlighted).

If you need to edit the contents of a header/footer frame after it has been copied to other pages, the program seems to have trouble updating those later pages. This necessitates deleting the extra copies, and redoing the header/footer creation. This is a nuisance, but isn't hard to do.

Importing Text

Calamus has a tendency to do its own default thing when importing text. If you select a text frame, then switch to the submenu option that displays font size, you can change this "default." Do so; it's a lot easier than editing font size later.

A "default" text ruler is also imposed when loading text. Fortunately, this is easy to replace from within the text editor, especially if you have made a macro for your preferred text ruler.

Text Editor

The *Calamus* text editor allows you to revise your text with much better speed than attempting to edit the text frame directly. It is, however, a very primitive text editor. For extensive changes, you're still well advised to use a word processor.

The block start/end function seems only to work for blocks consisting of entire lines or groups of lines. Moreover, once you've marked a block, there's only one function (block delete) that I've discovered.

Search/Replace

Search/replace functions threw me for awhile; you're supposed to be able to search/replace text strings. I had trouble getting this to work until I realized the dialog box has buttons controlling the action to be taken. (Select the replace button to make a replacement occur).

The same applies to search/replace of text style settings. This feature is especially handy for mass changes of font, point size, and the like. Just don't forget those option controls in the dialog box.

The Raster Print Option

The Print dialog box has some odd-looking settings like "1x" and "RASTER." These settings govern appearance of grey scale information, e.g., bit-mapped pictures in the printed copy. A light grey looks kind of pitiful most of the time, and can be darkened with "2x," for instance. The "Guide" book suggests using "1x" and "RASTER" together. "RASTER" causes the dots to be printed in a diagonal pattern that does look better (to me anyway).

Loading the Printer Driver

Calamus can be set up to automatically load the printer driver at program load time. Since I normally leave the SLM804's back door open, I don't load the driver until I close the door. It takes a few seconds before the printer warms up, and *Calamus* won't complete the load until it does.

Macros

You'll definitely want to use macros for your favorite text ruler settings and even pieces of text. When I'm making presentation charts, I use a macro that inserts the "bullet" symbol into the text. This character is one of those oddballs most easily found by searching the character set (font overview icon), and selecting it to make it appear in the text. A macro which inserts this character is a lot faster.

I haven't been able to get the [TAB] character into a macro, and I'd like to. On a bullet chart, I use the [TAB] to separate the bullet symbol from the text. Also, when you use a macro to insert text (while in the text editor), the cursor is left on the last character inserted. You must move the cursor with the arrow key to continue entering text.

Key Bindings

One of the most intimidating things about *Calamus* is its bewildering array of icons. Fortunately, they aren't that hard to get used to. Also, many functions have a key associated with them (displayed in the top area of the screen). As you become accustomed to working with the program, you'll find yourself memorizing some of these keys. In addition, you can customize the key bindings if you like, and define new ones. I haven't done this yet, but it seems to be a fairly simple operation.

Graphics and Sizing

Raster graphics include .IMG and Degas pictures. For best appearance, I usually import the image into a frame, then select the "size for printer" option. This will generally shrink a Degas picture considerably. Next, I select the "half-tone sizing" option and the "proportional sizing" option and adjust the frame size to something near what I want. Fine adjustments can then be made without the proportional sizing control.

Vector graphics such as GEM metafiles and *Calamus* vector graphics (CVG) can be sized similarly. Select the "ideal size" option, then with "proportional sizing" on, you can adjust the size to something near that desired, and make fine adjustments as above. This is basically what was done with the title of this article. The graphic was made with *Outline Art*.

Text Flow Around a Graphic

Calamus runs text around a graphic frame a little tighter than I like. There are two methods I've used to combat this. The first one is to define a "raster area" frame a little larger than the picture and set the picture inside it. This will preserve a white border around the image. The second method is to simply move the graphic frame a little bit up or down, and resize it in the horizontal direction—again just a little to get that white space.

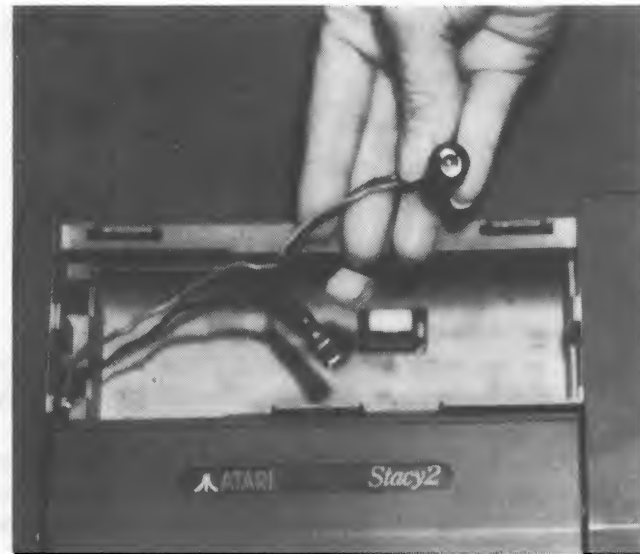
The following is a bug; sorry, folks, but I can't call it anything else. Text runaround to the right of an image just doesn't work properly. It looks as though any appearance of a [RETURN] in the text in that area just causes a line not to be adjusted at all, leaving it superimposed on the graphic. Yecch. I may be wrong about what causes the effect, but I ran into it with this article. More experimenting is indicated.

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Atari Myths and Mysteries

Dave's Programming Wasteland:

A Status Bear in Every Pot

(C) 1992 David C. Troy

I don't consider myself an "ST programmer." I've been programming for years using Pascal, C, Basic, dbMAN, et al., but until recently the ST's GEM operating system has simply eluded me.

Looking over documentation for GEM was much like paging through a German dictionary for me; the words were there and I could comprehend their meaning, but I didn't know the grammar and thus couldn't make a sentence with properly conjugated verbs.

GEM came to me last month. It seems that one day in May I woke up and, suddenly, I comprehended file selectors, alert boxes, VDI graphics, and more!

If you remember my column from last month, you'll know that I wrote a program that fiendishly removes excess Type One fonts from PageStream-generated PostScript files. Well, when it came time to release this program to the rest of the world, I wanted to make it look friendly.

When you're searching a one-megabyte file for fonts, the computer can be tied up for several seconds. The neurotic computer user will panic if his computer seems to be "doing nothing" for more than two seconds. I wanted to show the user that the computer *was*, in fact, doing something. But the next trick was doing that without making the task itself take much longer!

Migraph's *Touch-Up* and Adobe *Photoshop* on the Macintosh both have an excellent "status-bar" feature for every lengthy operation which might cause the user to panic. For example, when free-rotating a bit-image in *Touch-Up* (which takes a good while), *Touch-Up* will thoughtfully display a growing status-bar that accurately plots the progress of the operation. *Photoshop* does the same thing when you apply a complex filter, for instance.

Certainly, for a program to fool with a "status-bar" takes time. And the whole issue here is time; we're worrying about the "status-bar" because the operation *takes an unusually long time anyway*. So why make it take longer by adding an extra operation?

Aesthetics and human-factors-engineering are the answers here. There's a bank that has a live piano player in its lobby. Some retail stores are starting to install televisions playing CNN in their checkout lines. Some restaurants give out free drinks for people who are waiting to get a table. You get the idea. Sure, there's a cost for these niceties, but there is much good karma in such a practice.

Obviously, it is in everyone's best interest to minimize the cost of these distractions. We must do the same thing, just as the banks, the stores, and the restaurants must.

The obvious way to create a status bar is to pick a "space" on the screen which will be graphically filled as your operation goes from start to completion. If, when you're doing your operation, you know "where you are" and "where you'll have to be to be done," you can *map* your done-ness fraction onto the screen by using a simple proportion. Consider: (Current position relative to "done" / "Done" position number) = (Current screen position / Final screen position).

Since at any given time during the progress of our operation we know our current position, when we'll be done, and the final screen position (because we arbitrarily picked a rectangle to be filled), we can cross-multiply and compute our "Current Screen Position." And if we draw at that position, the status bar will grow proportionally to the progress of our "lengthy operation." Cool.

If we do it that way, we're doing one multiplication operation and one division operation for every iteration of our operation. While computers are certainly suited for multiplication and division, it's not something they do too fast. Your 680x0 processor *loves* to add, subtract, and compare, though. It does that real fast. Well, let's do it the fast way.

Suppose, real hypothetically, that our operation involved doing something 500,000 times. And let's suppose that we've allocated an area which is 270 screen pixels wide for our "status bear" (a pet-name that Jennifer and I came up with; makes 'em much more friendly). We know, then, that we're only going to draw our status bear 270 times, maximum. So why do all that multiplication just to figure that out? If we divide 500,000 by 270 to get *n*, we know that every *n*th pass of our operation should include an update to the status bear.

Notice that this involves no repetitive multiplication or division, and has a positive effect on global warming. All we have to do is increment a counter in each pass through our operation and see if it equals *n* yet. If so, draw more status bear. If not, go on, fat dumb and happy.

This is the fastest way to handle a status bear. It's clean (if not gorgeous), and adds only slightly to the overhead of your task.

If you use my *Font Killer* program from last month, you'll meet our status bear. It works fine. For the sake of mankind, I made my status bear generic, and the program you see here gives four portable 'C' routines (create_bar, remove_bar, raster, and show_status) that will let you add a status bear to any program with *minimal* effort. If you run the program here as is, it is a friendly example of the status bear's usage, and you can piddle around with it until you're comfortable incorporating the status bear into your own programs.

Play by Play

Rather than just talking about the status-bear itself, I thought I'd share the revelations I've had about GEM's VDI and AES routines, as they are an integral part of the status-bear's operation. And if just one of you is as clueless about the "true and proper way to use GEM" as I was, it can't hurt to clarify the usage of these routines.

The **main()** of this example program is very pretty. First, we call **appl_init()** which tells the AES, "Hey, we're starting a program." The AES sets up some global stuff for the program and also returns an ID which allows other concurrently-running applications to find your program. Since TOS is single-tasking currently, the only time this ID comes into play is for data-transfer between a program and a desk accessory. When MultiTOS comes along, it will become more important to pay attention to these ID's. But in the meantime, for programs that don't care about desk accessories, like our example, we can ignore this ID, and so we do.

Next we call our **open_vwork()** routine. It tells the VDI (virtual display interface) that we want to do stuff on the screen. The AES **graf_handle()** routine returns a *handle* which we can pass to VDI routines, so that other programs don't mess up the screen area for our program, and vice versa. Then we call **v_opnvwk()**. It tells the VDI what kind of "virtual workstation" we want, and it tells us what kind of workstation we have.

The arrays **work_in** and **work_out** are our friends. We fill **work_in** with information about what we want, (we assign **work_in[10]** the value 2, which tells the VDI we want to use actual screen (pixel) coordinates in our dealings with our workstation). **Work_out** is subsequently filled with information about our screen. **Work_out[0]** holds the horizontal (x) resolution (in pixels). **Work_out[1]** tells us the vertical (y) resolution. **Work_out[13]** tells us how many colors are available on our device. By computing the base-2 logarithm of the number of colors, we can determine how many bitplanes are on our screen, which will become important for us soon. (16 colors means four bitplanes, as in 2⁴, 256 colors means eight bitplanes, as in 2⁸, etc.) I wrote a quick loop which does this log₂ computation—you won't need to include any funky math libraries.

Our **main()** then creates an alert box, using the **form_alert** command. This is easy. The first parameter determines which "choice-box" will be the default (with the thicker outline). The second parameter is a text string. In the first set of brackets is a number which determines what kind of icon will be in the alert box: (1) gives the exclamation point, (2) produces the question mark, (3) gives the stop sign, and (0) produces no icon at all.

In the second set of brackets we have the text for our alert. Each line is separated by a vertical bar. The last set of brackets holds the text for our "choice" buttons, and each button is separated by a vertical bar character. You may include three choices maximum. The **form_alert** call returns the value of the choice the user made with the mouse. Since we don't care, we ignore it.

Next in **main()**, we call the routine **fake_background()**, which I concocted to prove that our status bear is totally transparent to the programmer and requires no additional programming. **fake_background()** draws a bunch of squares on your screen in whatever colors are available. Think of this background

```
/* STATUS.C by Dave Troy */
#include "osbind.h"
#include "gemdefs.h"
#include "obdefs.h"
#define SAVE0 /* RASTER routine Op-codes*/
#define RESTORE1
short work_in[11], work_out[57]; /* GEM VDI/AES
    variables */
int handle,dummy;
int contrl[12], intin[128];
int ptsin[128], intout[128], ptsout[128];
int xres,yres,bitplanes=1,colors;
int pxy_bar[4],pxy_back[4],pxy_cpy[8];
long growth_unit;
MFDBsrc,raster_buff;
open_vwork()
{ int i;
  for (i=0; i<10; work_in[i++] = 1);
  work_in[10] = 2; /* Set Raster Coordinates
    (not normalized) */
  handle =
  graf_handle(&dummy,&dummy,&dummy,&dummy);
  v_opnvwk(work_in, &handle, work_out);
  xres = work_out[0]; /* Determine X Res */
  yres = work_out[1]; /* Determine Y Res */
  colors = work_out[13]; /* Determine # of
    Colors */
  while (colors>2)
  { /* Compute bitplanes from # of colors */
    colors /= 2; /* Uses Cheesy Log Base 2
    loop */
    bitplanes++; }
  colors = work_out[13]; /* Restore Colors
    variable */ }
create_bar(msg,total)
char *msg;
long total;
{ int txt_x,txt_y;
  graf_mouse(M_OFF);
  /* Create background, border, text for
    status bar */
  pxy_back[0] = xres/2 - 155;
  pxy_back[1] = yres/2 - 40 ;
  pxy_back[2] = xres/2 + 155;
  pxy_back[3] = yres/2 + 45;
  /* Blit box area to buffer so we can get
    it back */
  raster(SAVE,pxy_back);
  graf_growbox
  (xres/2,yres/2,0,0,pxy_back[0],
  pxy_back[1],pxy_back[2]-pxy_back[0],
  pxy_back[3]-pxy_back[1]);
  vsf_interior(handle,0);
  vsf_color(handle,1);
  vsf_perimeter(handle,1);
  v_bar(handle,pxy_back);
  vsl_color(handle,1);
```


as the visual background that your program might have created up to the point you are ready to call the status bear. Note that the status bear does not interfere with this, or any other, background.

The **do_stuff()** routine is the one that would contain your "operation." **Do_stuff()** calls **create_bar()**. Let's go up there for a second and see what it does.

Create_bar() takes two parameters. First is a "message" that you wish to display in the status-bear's box. Second is the "total number of units" in your operation. So in our case, where all we're doing is counting to 500,000, we tell it 500,000. **Create_bar()** needs this number to figure out the variable **growth_unit**, which is the number we discussed earlier—500,000/270 (the arbitrary width of the bear), or approximately 1851. That means that in our count to 500,000, we will add to the status bear every 1851st iteration.

Create_bar() also determines where, in terms of pixels, to draw the status bear's background and the bear itself. I've chosen some arbitrary values which define these things.

Before anything is drawn, **create_bar()** calls my **raster()** routine, which will *blit* the screen area that the status bear and its box are about to overwrite into a buffer. This insures that **create_bar()** will not interfere with anything already on your screen. We'll talk about how the **raster()** routine works soon. **Create_bar()** goes on to draw a nice "grow-box" (like you see when windows open), the status-bear's box, and the text message we sent along. It also computes the rectangle where the status bear itself will grow, and it computes **growth_unit**, as we said.

Going back to **do_stuff()**, we have our counting loop which, as we said, is comparable to any other iterative operation you might be doing. We call **show_status()** in every iteration of that loop.

Show_status() does just a couple of things. It increments a counter, checks to see if we've reached our 1851st blip, and if so, it draws a new line on our status bar and resets our counter. Very simple.

Do_stuff() ends with a call to our **remove_bar()** routine. **Remove_bar()** calls our **raster()** routine, to restore the screen space that was overwritten by the status bear. We also draw a shrinking box, (to show that the bear has gone away), and we turn our mouse cursor back on. (We didn't want it on while our bear was being drawn—the mouse can mess it up.)

Back in **main()**, we close up our virtual workstation, draw another alert box with **form_alert()**, and then we exit the application with **appl_exit()**, to tell the AES we're done. Cool.

The RASTER Routine

A status bear is great, but when you draw one, you overwrite stuff that's already on the screen. And in some programs, it's not too easy to bring that stuff back. The AES will send messages to programs telling them that windows need to be redrawn, but not all programs use windows. And wouldn't it be better if the status bear cleaned up for himself? I thought so.

I wrote the **raster()** routine to take care of the status bear's sloppiness. **Raster()** takes two arguments, either SAVE or RESTORE, as well as an array that defines the rectangle we should save or restore.

```
txt_x = pxy_back[0]+15;
txt_y = pxy_back[1]+25;
v_gtext(handle,txt_x,txt_y,msg);
/* Set PXY for status bear */
pxy_bar[0] = pxy_back[0]+20;
pxy_bar[1] = pxy_back[1]+43;
pxy_bar[2] = pxy_bar[0];
pxy_bar[3] = pxy_bar[1]-19;
growth_unit = total / 270; /* 270 is "full
pixel width" of bar */
remove_bar()
{ raster(RESTORE,pxy_back);
  graf_shrinkbox
  (xres/2,yres/2,0,0,pxy_back[0],
  pxy_bar[1],pxy_bar[2]-pxy_bar[0],
  pxy_bar[3]-pxy_bar[1]);
  graf_mouse(M_ON); }
raster(mode,pxy)
int mode,pxy[4];
{ if (mode == SAVE)
  { raster_buff.fd_addr =
    (long)Malloc((long)(bitplanes*pxy[2]-pxy[0]
    )*(pxy[3]-pxy[1])/7);
    raster_buff.fd_w = pxy[2]-pxy[0];
    raster_buff.fd_h = pxy[3]-pxy[1];
    raster_buff.fd_wdwidth =
    raster_buff.fd_w/16+1;
    raster_buff.fd_stand = 0;
    raster_buff.fd_nplanes = bitplanes;
    raster_buff.fd_r1 = 0;
    raster_buff.fd_r2=0; raster_buff.fd_r3=0;
    src.fd_addr = 0;
    pxy_cpy[0]=pxy[0]; pxy_cpy[1]=pxy[1];
    pxy_cpy[2]=pxy[2]; pxy_cpy[3]=pxy[3];
    pxy_cpy[4]=0;pxy_cpy[5] = 0;
    pxy_cpy[6]=raster_buff.fd_w;
    pxy_cpy[7]=raster_buff.fd_h;
    vro_cpyfm(handle,S_ONLY,pxy_cpy,&src,&
    raster_buff);}
    if (mode == RESTORE)
    { pxy_cpy[4]=pxy[0]; pxy_cpy[5]=pxy[1];
    pxy_cpy[6]=pxy[2]; pxy_cpy[7]=pxy[3];
    pxy_cpy[0]=0;pxy_cpy[1]=0;
    pxy_cpy[2]=raster_buff.fd_w;
    pxy_cpy[3]=raster_buff.fd_h;
    vro_cpyfm(handle,S_ONLY,pxy_cpy,&
    raster_buff,&src);
    Mfree(raster_buff.fd_addr); } }
int cnt=0;
show_status()
{ if (++cnt == growth_unit)
  { v_pline(handle,2,pxy_bar);
    pxy_bar[0] = ++pxy_bar[2];
    cnt = 0; } }
do_stuff()
{ long count_to = 500000,i;
  create_bar("Counting to a
```

If we tell **raster()** to SAVE our rectangle, it copies the bitmapped data from the screen to a buffer we set up in memory. If we tell **raster()** to RESTORE our rectangle, it copies the data from the buffer to the screen. How handy.

We use the VDI call **vro_cpyfm()**, which stands for something like "virtual raster operation copy form." It needs to know the VDI handle, the "copy mode" (plain, AND, OR, XOR, etc.), an eight-element array defining source and destination rectangles, and a source and destination MFDB. And MF doesn't stand for what you think.

An MFDB is a "memory form definition block." It is a GEM data structure that eases raster operations. It contains a bunch of pigeonholes, which we fill in **raster()**. They tell **vro_cpyfm()** stuff about the source and destination memory. Since **src** is on the screen, all we have to do is set its MFDB **fd_addr** field to 0. That tells **vro_cpyfm()** we're on-screen. For **raster_buff**, which is our storage (and off-screen) MFDB, things are a little bit more complex. We must fill in more of the MFDB pigeonholes, which includes things like the **address** of our storage buffer (which we obtain with **Malloc()**), the height and width of our rectangle, the width of our rectangle in 16-bit words (pixels/16), whether we're using raster coordinates, and the number of bitplanes (I told you we needed to know that).

If we're SAVING, we copy from the screen source to the raster buffer we create. If we're RESTORING, we copy from the buffer to the screen, and release the buffer.

Because we're intelligent and figure out resolution and how many bitplanes we have, **raster()** (and subsequently the status bear as a whole) will work and be clean on any resolution, with any number of colors.

Try It

I've tried the status bear example program on every TT resolution, on ST's and some other weird video systems, and it works great on any one of them. Note that the span of the background box of the status bear is 310 pixels. This is fixed, and will subsequently work under low resolution which has a width of 320 pixels. You can change the coordinates of the bear and its background box to be more relative, if you wish. But as it stands, it works fine on *every* resolution.

Why Do This?

Status bears are important. They represent good programming practice. No user should be left waiting for something lengthy to happen, wondering if his computer has finally slipped off the edge of time. I encourage programmers, even programmers of non-gorgeous applications, to adopt this status bear (or one like it). The way I lay it out, it's practically a GEM function. It requires no great thought, and won't disrupt your program's screen function in any way.

I don't claim to be a virtuoso GEM programmer. If anyone has any better ways to implement the status bear, let me know.

Font Killer

I have released last month's *Font Killer* program into the public domain. It is available on this month's CN PD disk as well as on GENie.

```
zillion...",count_to);
for (i=0; i<count_to; i++)
show_status();
remove_bar(); }
```

fake_background()

```
{ int
x_scan,y_scan,x_res=xres+1,y_res=yres+1,
color=1;
graf_mouse(M_OFF);
v_clrw(handle);
vsf_interior(handle,1);
for (x_scan=(x_res/20); x_scan<=x_res;
x_scan+=(x_res/20))
{ for (y_scan=(y_res/20); y_scan<=y_res;
y_scan+=(y_res/20))
{ pxy_bar[0] = x_scan-(x_res/20);
pxy_bar[1] = y_scan-(y_res/20);
pxy_bar[2] = x_scan-1; pxy_bar[3] =
y_scan-1;
vsf_color(handle,color);
if (++color >= colors)
color = 0;
vr_rectf(handle,pxy_bar);}
if (++color >= colors)
color = 0; }
graf_mouse(M_ON); }
```

main()

```
{ appl_init();
open_vwork();
form_alert(1,"[1][ A Sexy GEM Program |
From Current Notes | July / August '92
|[ NOT ]");
fake_background();
do_stuff();
v_clsvw(handle);
form_alert(1,"[1][ Looks Good, eh? |
Dave's Status Bear | (C) 1992 D.C. Troy
|[ I Like Ike! ]");
appl_exit(); }
```

The status bear example is also available on this month's PD disk (both source code and compiled program), and will be available on GENie too. If anyone has any comments or questions, let me know.

Questions? Ask Your Doctor, Not Me!!?

Phone: (410) 544-6943

FAX: (410) 544-1FAX

MAIL: David Troy, 556 Baltimore Annapolis Blvd.,
Severna Park, MD 21146

GENIE: Toad-Serv.

CompuServe: 72470,1605

Internet: dtroy@jhunix.hcf.jhu.edu

Photo Collage with Touch-Up

by David Barkin

Atari software has reached maturity as a platform for desktop publishing. All types of new programs are appearing for the manipulation of raster and vector images. *Arabesque Professional*, *Silhouette* and *Mega-Paint Professional*. On the high end there is *Retouche* in three forms, *Didot Line Art* and the soon-to-be-released *Cranach Art Studio*. But if your interest lies in the manipulation of scanned photographs, only *Retouche* is really designed to do the job at the moment. And those programs are out of the price range of all but the rich or insane computer users (you know who you are). Well, there is one program that's been around for a number of years and will do the job. Yes, that old favorite, underrated and seemingly abandoned by the press, is the perfect answer—*Touch-up* by Mi-graph.

This article is not a review of *Touch-up* but rather a tutorial on how to create flawless photographic collages. It ain't easy but it works. This tutorial also assumes that you are familiar with the basic workings of *Touch-up*. Before going on with this tutorial let me add that if you work only with large raster images there is no real reason to purchase any of the other low end products anyway, since *Touch-up* can do it all.

I've always wanted to do neat tricks with photos. Since I was a child, I have had this secret lust to put my friends and relatives in jeopardy by sticking them under Godzilla's foot. Yes, into the jaws of death would go my cousin, if only I could. When I got older, many were the politicians who would have been summarily dealt with if only I had an easy way to express my opinions of them graphically. And lo with the advent of my personal computer this whole new world of terror has opened for me and *Touch-Up* was the first, and currently the only, program that does these tricks.

When I first started making photo collages, enthusiasm was far stronger than clear thinking. I evolved a long and complicated method that achieved surprisingly poor results, which at the same time left me in an ecstasy of happiness since I could do these things at all. Fortunately for me, I have a friend named Greg (he wishes to remain anonymous so I won't reveal Greg Koomey's real name) who not only programs in Postscript but can watch me at my various computerized inanities and come up with some great, if sarcastically expressed, solutions. Now here it is, his masterpiece of simplicity.

First: I'm going to be making a collage of my boss's daughter superimposed on two lions. My lions will form the background and the innocent (actually, the kid is a pain in the butt) child will be placed in a portrait position, decently exposed to their hungry interest. Load in your foreground picture and cut out the person or object you wish to superimpose on a background. Use the adjustable eraser in lightning mode (indeed, try to do as much as possible in lightning mode since it contains an undo function). Where necessary, use the pixel editor.

Second: Create a clip box around this picture and save the file. Reload it into *Touch-Up* and create a new clip box by using the menu command "clip to page" and save the picture again calling it FOR1.IMG. or whatever. Now save the clip again as a separate file called FOR1S.IMG. In this case, S stands for silhouette.

Third: This is the hard part. Using the pixel editor in lightning mode go over the entire picture filling in the open spaces around the outline. Take a look at diagram 1. You want to leave as much as possible of the

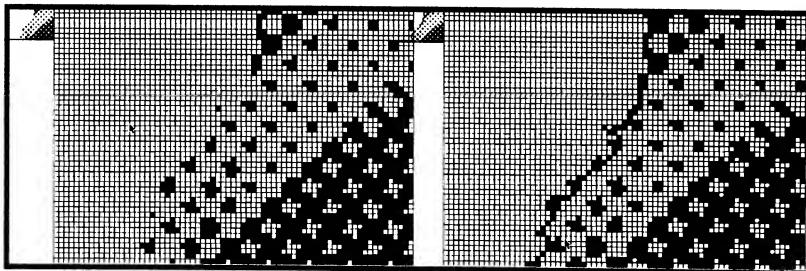


Figure 1. Scanned photo before outlining. Figure 2. Photo after outlining. Note that we are trying not to superimpose our outline over the future background.

ragged ends of your photo intact but the object of this exercise is to create a silhouette which will be used later on to create our collage. No, you don't have to fill in the entire picture by hand; we're trying to make this easy. After you feel you've completely outlined your picture, save it again as FOR1S. This is because you've probably blown it and left one itty bitty hole and let's keep our eye on the eight ball and not lose all our work.

Forth: Use the fill command to fill the surrounding area with black. If you've done your outline correctly, your image will be surrounded in black. If little pieces of black have invaded your picture, then reload the clip box with the last saved version and go back and check your outline for the little spaces that the fill crept into. OK, it's done; invert the picture. You now have a negative image surrounded by white. Reload

FOR1.IMG into the clip box (write mode transparent) and, presto, you have a perfect silhouette. Save this file as SIL1, keeping your outlined version intact for possible future combinations with other foreground objects.

By this time you've spent hours trying to cut out, outline and ready your photo for overlapping the background. You are also cursing me for starting you on this process in the first place. But, believe it or not, the final result of this exercise can be accomplished in less than half an hour. Hey, practice makes perfect.

Fifth: Load your background photo into the main screen. In this case, a photo of two puzzled lions. Use the view picture option and set the clip box for SIL1.IMG. You now have your clip box and background ready to go. Hopefully, you know where the clip should be positioned. Well, before doing anything else, set the write mode to transparent and then invert the page. Load the clip box. Don't move the clip box again. I now have a negative of my two lions (I don't know what you have) and a black silhouette of my boss's daughter. Invert the page again. This will restore my two lions and leave a large white space where my silhouette was. Now load the clip box with FOR1.IMG, which should be the exact same size as the silhouette.



Figure 3. The silhouette is ready to be pasted over the background.

You now have a perfect overlay. Well, actually, it's not perfect, there still may be some tiny problems where you blew it in one of the above steps.

Sixth and Last: Go into lighting (set the write mode to replace) and select lasso. There may be small places in your composite where pixels overlap or where you did a poor job of cutting out the foreground picture. Lasso either a small piece of the foreground or background and (no pun intended) touch-up these areas. Using lasso is a little tricky. If you just try to grab a small piece of the screen you have only a limited time before the lasso ceases to register. You can, however, click with the mouse, move the mouse and click again. This results in a straight line. By combining the two methods you can lasso an area large enough and clean enough to touch-up the edges of your collage. One little note on this question is that the two screen accelerators, *Turbo ST* and *Quick ST* both limit the amount of time you have to do this lasso, so that if this is a problem, turn them off.

As I said, the above composite took all of a half hour to create, not counting the time to scan the photos and beg my boss for a raise. But consider, a line drawing and/or cartoon characters can be silhouetted in a matter of moments.

Next month we will go into the creation of designs using *Calamus Outline*. There are some more or less undocumented features that can, if properly used, create stunning images with near perfect grayscale fountains.

Addendum:

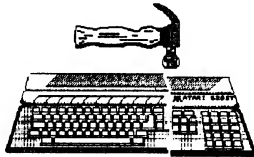
After this article was written I acquired *Retouche Jr*, which, as it turns out, has a list price of \$199.00. Without going into a review of this program I would just like to mention that unless you own a true

grayscale scanner *Touch-Up* is still the only way to go in making photo collages. On the other hand, if you do own a true gray scale (not to be confused with dithered grayscale) scanner even the junior version of *Retouche* will make this process much (we're talking big time "much") easier.

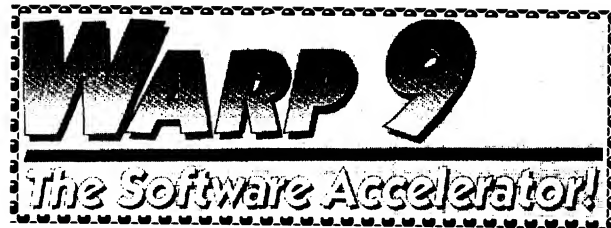


Figure 4. The final result shows two rather puzzled lions examining the child irresponsibly turned over to my care.

ST TOOLBOX



by J. Andrzej Wrotniak



A Mother of All Screen Accelerators?

Remember *Quick ST 3.0* by Darek Mihocka (see the *ST Toolbox* of November '91)? In spite of some minor reservations, I liked the program and used it as a standard part of my regular ST setup.

Codehead Technologies (under the leadership of Messrs. Johnson and Eidsvoog) have acquired, recently, the rights to this software screen accelerator and are distributing it as *Warp 9*.

Not Just a New Name

The new name is cool, but this is not the only change. Internal improvements have been introduced as well, removing some of the remaining incompatibility problems (I wasn't able to find any).

As far as the speed is concerned, do not expect a breakthrough. The *Quick ST 3.0* squeezed out all performance that was there, and my benchmarks (using Mr. Mihocka's own *Quick Index 2.2*) have shown *Warp 9* either as fast as *Quick ST 3.0* or just 1% or so slower. Let me spare you the numbers—they are almost exactly the same as those shown in the November *CN* issue.

What it means is that *Warp 9* speeds your screen operations (both graphics and text) *very* considerably and in a manner completely transparent to the user. Just put it into your \AUTO\ folder, forget it and enjoy.

Memory Considerations

The *Warp 9* program by itself uses quite a lot of memory: almost 70k (as compared to 55k used by *Quick ST 3.0*). With the *Warp 9 CP* accessory this amount in-

creases to 87k or so (with quite lot of functionality added).

Those who still are limited to 512k of RAM may find this prohibitive—for example, forget about running *Publisher ST* under *Warp 9* on a half-megabyte machine. On the other hand, the users with one megabyte of RAM will not be hurt considerably, and those

- Replacing the standard screen font with one of your choice (in the popular Degas format). Some of us may use this feature just to make our screen look different; I found it very valuable, because it allows me to type in Polish. Previously, I had to use a freeware *Font Tricks* accessory (also by Mr. Johnson, whom else?), but having this feature built into the *Warp 9 CP* saves some space and one accessory slot (and, besides, the latter has a better "look and feel," as subjective as it may be). A font can be installed as a default and/or changed on the fly.

(The *Warp 9* package also contains a truckload of Public Domain screen fonts and a screen font editor. If you want to write in, say, Icelandic, the font substitution alone may be worth the upgrade price.)

- Replacing the standard desktop fill (plain gray in monochrome, greenish in color) with a pattern of your choice. A small thing, you may say, but I really like it. A desktop fill pattern editor is also included.
- Installing a desktop picture (in *Degas*, *Degas Elite*, *Tiny* or *Prism Paint* format. If you use *NeoDesk*, you will not need this feature, but without *NeoDesk* you will like it. Of course, this will cost you some memory (32k for a monochrome screen), but very few things come nowadays without a price.

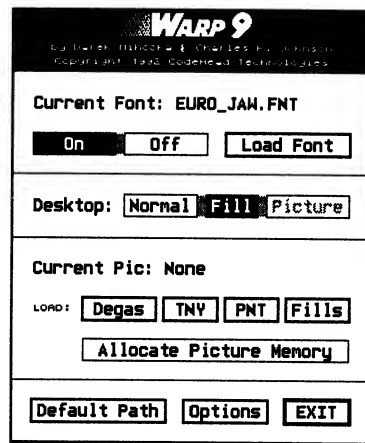


Figure 1. The *Warp 9 CP* accessory let's you change screen fonts and the desktop background.

with more will barely notice any difference.

New Goodies: The Good News

The new version (or rather its accompanying utilities included in the package) also has a completely new user interface and additional functionality, and this is what really makes the program a desirable upgrade to *Quick ST 3.0*.

When you run *Warp 9* with the *Warp 9 Control Panel* accessory installed, then, in addition to speeding up all screen output operations, you gain a number of extra capabilities:

- Disabling the “zoom boxes” which usually are shown when a dialog box appears on the screen (or disappears from it). This makes the process somewhat faster.
- Assigning function keys [F1], [F2], and [F3] to the alert box buttons. If this feature is enabled, then, say, instead of moving your hand off the keyboard to click on the [No] button when asked by your word processor whether to replace a word, you may just hit [F2]. For some programs, this feature comes in very handy.
- Activating a mouse accelerator. This will change the way in which the mouse pointer position on the screen responds to the mouse movements on your mouse mat (What? You’ve got no mouse mat? What a stupid way to save five dollars!). This is perhaps the best accelerator I have yet seen, with a very high degree of customization: in addition to the four built-in presets you may define your own response curve. I found one of the presets very much to my liking, and this is the first accelerator I really use all the time.
- Changing the mouse pointer behavior at the edges of the screen. You may have the pointer re-appear on the opposite edge, stop it *before* entering the menu bar (right click will let you go there), or jump to the menu bar at a right click. Well I am quite happy with the default GEM setting, but some of us may like this feature, and if you do not use it, it does not get in your way.

More Goodies and Two Versions, Too

Some of the above extras were already included in *Quick ST 3.0*, but the *Warp 9* implementation is, I

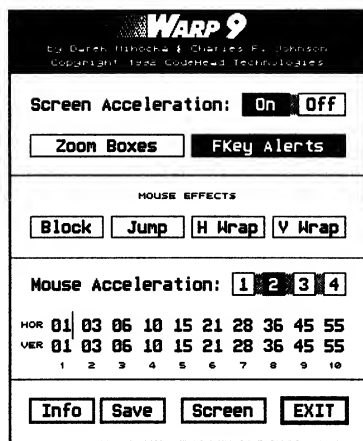


Figure 2. Other options in the Warp 9 CP accessory include a sophisticated mouse accelerator and Function key alerts.

think, much nicer and also easier to customize. Most of these functions have been available before in separate accessories. Putting them all together is not only more convenient, but also saves memory, confusion and accessory slots. And, besides, this thing is *clean*, I have no problems to report; everything works just fine.

Another part of the package is the *Warp 9 Customizer*, originally written by Mr. Robert M. Birmingham as *Quick ST Customizer*. This program also underwent some minor but desirable changes, and it allows you to edit desktop fill patterns and screen fonts for use with *Warp 9*. While it does not allow you to exchange individual characters between font sets (I am, indeed, missing this feature), it does a decent job otherwise and is a welcome addition to the package.

And finally, the program comes in two versions: one for the ST and one for the TT series of our computers (not having a TT, I was able to use only the ST version).

The brand-new user manual is well-written and useful for users at all proficiency levels. It is also nicely printed, and the front cover is not only very good looking, but also devoid of any intelligence-of-fending blurb. With software ven-

dors often treating us, program users, as a bunch of idiots, this is very refreshing and should be appreciated.

An Offer Hard to Refuse

The street price of *Warp 9* is around \$35 (the CodeHeads also have reasonably priced upgrades for *Quick ST* and *Turbo ST* owners). All this makes the CodeHead offer very hard to refuse. If you have one megabyte or more of RAM, buy this program (or an upgrade). If you have less memory than that, first upgrade your computer and then treat yourself with *Warp 9*. You will not regret it.

Green Goblins Strike “The State of Mind”

The last “State of Mind” columns contained some errors introduced by the green goblins which mess up my writing after it is done (or after the final editing).

First of all, the paragraph at the bottom of the Page 22 should start with:

What is wrong with this? – would ask my friend.... and *not* with

What is wrong with this? – I would ask my friend...

Obviously, asking a FORTRAN programmer about data structures does not make much sense, and the “I” which sneaked in made the whole paragraph lose its meaning.

Minor glitches: a quote mark is missing before *Wow!* at the bottom of Page 23, and at the top of Page 25 I’ve typed in *friend real* (twice) instead of *friend float* (this happens when you mix Pascal and C++ on the same page!).

If you’ve found any of these errors when reading my column, you are authorized to buy yourself a dinner at the Highlander Restaurant in Petersburg, West Virginia, where I am going as soon as I am done with this article.

Enjoy the Summer!

■■■■■■■



WARP DRIVE!!!

Note from Dave:

The SST, which I first wrote up the design of in *CN* some time ago (3-part article), has been shipping since February 1992. Now that the rush to ship is over, I felt it would be appropriate to take this opportunity to give you a glimpse into *the kind of people* that bring you products such as the SST.

This is from the first chapter of the SST manual; every other chapter, in keeping with *Gadgets Manual Guidelines*, is another story.

An Excursion with the Small Family

Open the long, long door, painted the cheerful red of the entire car (with the exception of the shiny black of the hood scoop). Climb into the driver's seat; your feet take about a mile to reach the pedals. Pull the door shut. The door was built in 1970; it seems heavy compared to car doors made these days. (It is heavier; it's built entirely of steel instead of polymers and plastic.)

The three kids clamber into the back, which really is a miracle; I can barely get myself into the smaller back seats, but the kids can seemingly stretch and squeeze through any obstacle. I guess back in 1970 the designers thought that back seats were really only decorative, especially in a Super Sport 396 Camaro.

Sandy, my wife, climbs in the passenger side seat, laboriously pulls her door shut, muttering about how difficult the car is to get into. Personally, I must admit to noting how well her legs go with the car's long frame, but I never tell her that. And I don't ever tell her that it is part of the American Dream to drive a hot sports car with a beautiful woman in the passenger seat; her ego, after all... Besides, Sandy manages the business that made getting my dream car possible! She turns, says, "Everyone buckled in?"

By now, the kids, familiar with the drill, are buckling away; Eric, who's practically 10 and the oldest, is helping Jamie, who is 3 1/2 and the youngest. Jennifer (9) somehow always seems to find the seat behind me and Jamie sits in the middle.

Jamie keeps saying, "Red car! Red Car! RED Car!" Jamie is clearly winding up towards nothing less than a thermonuclear explosion of excitement, grinning, bouncing, trying to see ever more out the windows.

In fact, when we were going through a book designed to teach colors, I pointed to a picture of a banana, Jamie said, "Yellow"; I pointed to a leaf, Jamie said "Green"; and I pointed to a picture of an apple. Jamie beamed at me, and confidently said, "Red car!"

I buckle in the racing harness (sure is scratchy on my neck) and twist the key. The starter grinds and moans. It's pushing against high compression, 10.25:1, as each piston squeezes the fuel/air mix to a fraction of its former size, then "goes over the top" and releases it. Squeezing the fuel/air mix that very tight brings about high efficiency, better mileage, and more power. Someday I'll have to invest in a racing starter; this engine is too much for the present "grinder."

Oh, I forgot to tell you. When we bought the car, the engine in it wasn't the 1970 fire-breathing 375 horsepower 396 cubic-inch monster; it was an engine from two years later, after the smog regulations kicked in. Any car nut ("gearhead," as Sandy calls 'em) will tell you that 1970 was the last year they made super performance engines; for instance, in 1971, all the compression ratios dropped to 9:1 or less, which was nice for nitrogen oxide emissions, but really hurt in the horsepower and torque departments. They even feed back part of the exhaust into the intake ("EGR")!

Man, having a 1972 smog engine in a 1970 "SS-396" Camaro was to me an act of *complete heresy*. I mean, heck, in these sterile days, 8.5:1 is a typical compression ratio, and little computers run the engines to try and get mileage without too much smog, and compromise all the time; I know, because some hackers sell "performance chips" you plug into your car to wake it up...

Ah, a sputter from the engine. One of the cylinders fires and *twists* the engine through many revolutions by itself; the starter suddenly gets real useless. Pedal to the floor, hold it, and back, and the engine roars into life, shaking the car as it begins, then evening out as all eight cylinders start running with the smoothness that the 454 engine has always been known for. It really does shake the car; the engine twists so violently in the motor mounts that our body-work guru has an appointment with the Camaro to add hefty frame stiffeners, lest the paint on the car develop cracks from frame twisting!

The garage resonates wickedly with the engine, and I know better than to hang around; I've rattled things off of shelves with the sound of the Camaro! The amazing thing is that we went through great efforts to quiet the car, and largely succeeded without pulling its teeth; without mufflers, that 454 is as gut-frightening as the solid rocket boosters of the Shuttle.

So I hold the brake tight and put the transmission into "R" and hear the sudden squeeeeak! as the rear tires do half a spin on the garage floor, despite the best efforts of General Tires to keep traction. (The floor has many, many skid marks on it from backing up. Sandy looks at them and sighs; I believe the word she uses is "...Men..." but all the meaning of how she applies it is lost if I tell it that way. It's all in the expression and tone of voice.)

Out for a "Spin"

A 454 (8 liter) engine spinning at 2500 RPM (fast idle, on cold startup) is well into its "torque curve," where it is well on its way to supplying sheer, brutal *twist*. Not many people know it, but torque is where everything happens; that twist (torque) is what twists your tires and makes the car move. (Horsepower is more an intellectual measurement of the ability of the engine to accelerate mass over a period of time.) So when I put the Camaro into gear, when it's cold and thus fast-idling, I can't blame the brakes for not holding the rear tires down entirely. There is just too much engine in there and it's much too enthusiastic about waking up.

We begin to back out of the driveway, in fits and starts, for the instant I take my foot a little off the brake, the rear tires squeek! shrilly and spin some. Sandy has a forced, fixed smile on her face as she contemplates our neighbor's peace of mind when the resonant roar of the Camaro rattles 'em.

If anyone would know, it would be Sandy. She grew up at Edwards Air Force Base, in the California desert where the Space Shuttle lands, during an era where the Air Force was testing darn near anything that would make a sonic boom, including the engines for the Saturn 5, the most powerful machine ever built. Sandy knows all about shaking houses and sonic booms! Her Dad Gary flew the world's fastest plane, the SR-71A, which sports twin wicked-powerful Pratt & Whitney turbo fan engines, the world's neatest looking shape, and is made of a titanium alloy, because nothing else would hold together when the SR-71 hit Mach 3+. The titanium glows red at that speed; the fuel, JP-6, is only used by the SR-71, out of all planes, and is a special blend that won't explode in a fuel tank that's in the frame busy glowing red. Sandy's Dad knows all about JP-6; he ejected out of a burning SR-71 that went down (and came to rest on the only power lines in miles of vacant desert). I am grateful to that ejection seat, for Sandy (and her Dad)!

So, I got rid of the 1972 smog engine, of course, and went to a Chevy dealer to find the original 396/375 HP motor. It was nowhere to be found, be-

ing a 21 year old engine, and believe me, I looked at all the Chevy parts places in the country. (It would have been nice to restore the car to original spec, but if you can't, you can't.) And the thought trickled into me... if you can't restore it to original, maybe you should restore it to better...

And then I noticed a sign at the dealer, Burt Chevrolet:

Close Out Sale: LS-6 454's.

Let me explain. Everyone has an "LS-6 454" dream somewhere in them. It takes many forms. The person you dream of for a mate. The perfect house. The most completely cool computer. The ultimate song a musician strives for. The painting that the artist can't quite get on canvas. The dream... I had read about the LS-6 for years in "gearhead" magazines, but always knew it would be beyond me. But it was one of my greatest dreams; my most-wanted engine ever.

The LS-6 is the most powerful street engine ever made by Chevrolet. It's a "Big Block," a design that debuted at Daytona in 1963, and which lapped the competition (and set new track records) just during qualifying! The LS-6 is "rated" at 450 HP, but everyone chuckles at that figure; someone made it up for insurance companies, so that buyers could get insurance for one of these fire-breathing Camaros (or Corvettes). These engines commonly show 550 HP on a dynamometer. (The LS-6 has three close brothers; the 454 LS-7, and the legendary 427 L-88 and ZL-1's. Unfortunately, all of these engines are completely "competitive off-road racing only"; they burn aviation gas of 102 octane that you can't buy anymore since the supercars faded away, and they are not designed for minor things like "idling," nor mufflers, since these are race-only engines.). But the LS-6 had 10.25:1 compression, which combined with Denver's high altitude (5,280 feet, or about 1700 meters), enables it to barely get by, with super unleaded gas and some David tuning work, without pinging or flat melting pistons from premature detonation. (I doubt I will ever drive the Camaro to sea level, but if you see a red Camaro filling up with 105 Octane at an airport, stop and say hi, ok?).

Anyway, this makes the LS-6 the most powerful engine I could get that I could buy gasoline for, and run on streets.

We had a 'Vette shop install the LS-6, because they are used to all the touches the super motors require, from extra-large carbs to dual fuel feed lines to free-flow exhausts. And it turned out to be a good thing we did this; the old "smog motor" had a cracked and loose "torque converter-flywheel" housing, and it was just waiting for a bump to fall into madly spinning (100 revolutions per second) parts and wreak incredible havoc.

Really, the LS-6 is amazingly friendly, as long as you keep your foot off the gas pedal, or perhaps use the finest of caresses only. We "idle" down the street at 30 MPH. (At this point, I've only touched the gas pedal to start this thing!) The brakes get a workout at the stop signs. The engine warms up quickly, a property of high compression engines, which are more efficient. (Smog? Am I polluting the air with this nuclear engine? In reality, if an engine is cared for and in-tune, its smog emissions are very low, well within even California's restrictive regulations. This engine was designed to be efficient, and if you blow unburned gas out the tailpipe or other stuff that means incomplete burning and smog, the engine is not efficient! Really, it's the people that don't take care of their cars that really need "smog equipment." Let me tell you, the LS-6 in the Camaro is well, well tuned; that's where I learned its vibration and noise could rattle things off garage shelves.)

Finally, we come to the Interstate Freeway, (I am not going to say which one!), but it's barely (if any) used at this time of day. The engine is warmed up enough; you do not push a cold super motor, or you end up with a handful of twisted metal pieces through the sides of the car. Anyway, I pull off to the side of the road at the start of the entrance ramp; at this signal, everyone turns to Jamie, the three year old, who basks in the glow of attention.

"Say it!", Jennifer (9) urges. "Go, Jamie!", Eric (10) says. But Jamie is patient, bides his time (someday he'll be a great poker player). The suspense

builds; he knows He Is In Control, a heady thing for a little person just three years old with 500 HP!

And then when we've waited Long Enough, he shouts,

"W A R P D R I V E !!!"

We all echo him... and everyone braces themselves. I let the brake off, ease into the gas. (If I punched it straight out, we'd start doing "circular doughnuts" right there and smoke 20,000 miles of wear right off the tires. I know, the hard way.) Despite my gas-pedal efforts, there are suddenly two dark lines on the pavement a hundred feet long, and I have had to work a bit to keep the car straight. (The kids think the squealing tire sound is great, I'll tell you!) After we hit fifty, in a couple (maybe three?) seconds, I floor the gas pedal and the carb, where air and fuel mix, says "Hey, it's rock and roll time!"

Inside the carb there are "barrels" where air rushes through and mixes with gasoline in a fine spray; normally, the Camaro operates on just two of them, the "primaries." But when floored, another two barrels ("secondaries") open up, and begin enthusiastically dumping gasoline and air into the engine. In fact, this particular carb has 750 CFM (Cubic Feet of air per Minute, 27 cubic meters/sec) ROARING through it; the loudest noise the whole car makes is from the carb intake, through the hood scoop, not the exhaust noise (which we quieted). The LS-6 takes all this potential energy of gas and air being fed to it, winds up, and *twists* the rear wheels. The acceleration stiffens and I hang on to the steering wheel tightly; my arms pull towards me from the acceleration "G" force...

And the Sound... the sound... I must tell you the sound alone is the best thing about it, the reason I do it. It's the sound of a hot engine winding up, mechanical racing cam slamming the valves shut and lending a clipped note to the sound; the same sound you hear from a rock guitar winding up an amplifier past its limits. It gives me goose pimples. In Spectre 128, I spent 125,000 bytes of the release disks on a digitized sound file of just this sound, because to me it was the sound of "pushing the envelope"; it was our

"dedication page" I gave directions to in the manual. The group "Boston" has this sound down pat, and Tom Scholz from that group now sells the "Rockman" to let you get that sound; I have one.

The engine claws and screams its way up to 6,500 RPM, where the cautionary yellow line is (red is 7,000 RPM), and I shift into second out of first. Given that the speed laws in this country max out at 65 MPH (about 100 KPH), I won't say that we exceed that limit... but I will tell you that I just shifted into second gear, out of three (automatic transmission; clutches do not live long behind an LS-6, so I went automatic with an especially strong "built" transmission).

Second gear is sort of a relief. You're no longer shoved back into your chair and your cheeks don't feel funny from the "G" (1.0 G = Earth Gravity) forces on you. You simply continue to watch the speedometer wind clockwise at a ridiculous speed. This is when they still put 150 MPH speedometers in cars, and meant it. And, this acceleration is happening at a time when wind resistance should be slowing things down! (Ah, but the hood scoop on the Camaro just lives for wind; it pulls in the wind, and feeds the resulting pressurized air into the carb, force feeding it, with cooler/denser air, for even more power. See, you can win sometimes!)

Now the fine suspension of the Camaro comes into play. We're still accelerating heavily, but we're not unstable; the Camaro sorta hunkers down and grabs the road. The suspension has the incredible ability to corner at more than 1.0 G, which is the theoretical limit. And the spoilers direct the rushing air to pushing the car down, to help stabilize it.

I've never run the Camaro on a formal race track (just you wait... Bandimere Speedway, Summer '92, here I come!), where a standard acceleration run of 1/4 mile is timed, and your speed at the end of the distance is logged. But it is very few seconds indeed to come off the stoplight, go up the on-ramp, to get to where I am slowing down to merge with traffic (if any; I usually don't do one of these Banzai's with traffic around).

Somewhere in second gear, I very reluctantly let off the gas some, and the secondary throttle valves slam shut, and the screaming sound of the engine that I so love disappears. I do this because the Camaro is approaching the design limits of its tires. I suppose if I bought Pirelli tires, which have a higher speed rating, I could easily hit the RPM limit/rear-axle-gear-ratio/tire-size calculated top speed of 170 MPH. There's no question the engine is there to do it, the horsepower to push against the massive wind resistance at that kind of speed.

But I went 150 MPH in high school at age 17 in a souped-up Firebird... and I'll tell you, there's so little room for error at those speeds, where the white lines on the road blur together into a single line, where you must keep your eyes miles ahead, watching for curves, cars, stoplights (ouch!) or the local speed-limit people. (The guy driving ran into them, and has the traffic ticket he got for it framed, hanging on his wall; 140 MPH clocked, in a 55 MPH zone. He got in considerable trouble, as you might imagine.) That speed is exhilarating, but also deeply terrifying.

Into third gear, regular old "Drive," and we're pretty much done with the exciting part. Oh, sometimes if a car gets irritating, we "hunt it" and pass it by. (I finally explained to Sandy how to drive the Camaro by telling her to hunt down other cars instead of driving with them; after that, she did fine.) It isn't much challenge, and I admit to the immaturity of effortlessly going by people in modern day "fast sports cars." (And every now and then, I run into someone else with an old super-car like mine, and of such things I will only say that we both smile and wave to each other when we part, miles later.)

But I'd like to tell you... for the very long seconds while we're winding up in first gear, the sound living in my ears with the beating of my heart, the utter power of Chevrolet's best pushing that car...

... my soul flies, and I am free.

The SST

That is speed, and that is why we built the Camaro, and the SST accelerator board for your machine. We like

to do this. (Of our other products, MegaTalk gives you the fastest serial and SCSI you can get, and Spectre is well known to whomp on Macs in drag races.) The SST brings your Mega ST into the 90's, in many ways.

After you plug in your SST, you'll be blown away for a few days by the speed of "everyday" operations. Then, you'll get used to it, and get to see your friends getting lustful after seeing the SST. Then, you'll be so used to this level of performance that it'll become your standard. And it's fun.

That's why I love to take people for rides in my Camaro, I admit...

It grows on you, this SST does. Little things. Windows don't "open" anymore, with animation "grow-boxes" showing them opening, like you can see on an ST. They simply snap, Closed to Open, in one eyeblink. Doing software development, I crunch pretty large files in, oh, three seconds. (It used to take thirty.) The file selector box scrolls by so fast I just pick a spot in the scroll bar I think is close to the file, hold down the mouse, and in no time we're there. (Before, it took too long to do that.) Same thing with scrolling in text files; you will often find yourself zooming straight to the beginning or end without meaning to, until your habits change. And the "Boink" program, with its bouncing ball, changes from a slow "bounce...; pause, bounce...; pause, bounce...; pause" to something sounding like a machine gun!

I guarantee you will really appreciate the SST only after the first time you go back to an ST (I know.) All the little things you've gotten used to disappear, and that machine that seemed so fast when you first saw it... well, it's dragging its feet. You'll really appreciate getting back to the SST, believe me!

In a way, if you're lucky, you'll be going back and forth from an ST to an SST machine. That'll keep your feel for its speed fresh. I do the same thing. I drive a van to school sometimes to pick up the kids, and trying to get up speed to merge with traffic on an on-ramp, or cornering, reminds me real fast I'm not in the Camaro.

The Design Remains the Same

It shouldn't surprise you that the SST design follows the 454 Camaro's

design in many analogous ways. Heck, there's only a few ways to get fire-breathing power out of anything, and engineers know them. It boils down to this: the amount of gas and air the engine can get, per second, into, burned, and through the engine, determines how much power it can output that second. Thus, to get high performance, you typically use a big engine (thus, more air and gas get pulled in naturally per engine spin) and you feed it as much gas as it wants, with a big, efficient carb, like a 4-barrel, and tune to ensure it burns all the fuel it can handle. Planes aren't any different (just faster!). The SR-71 uses huge Pratt & Whitney turbofans with air intake tuning, and the pilot could turn on afterburners which simply dump raw JP-6 gas into the engine for more performance. (More information is still classified.) The Camaro uses 454 cubic inches (8 litres) of engine, a 4-barrel carb, tuned exhaust, and twin fuel lines, and does it work!

So in the SST's case, we used a big, 454-style engine (Motorola 68030), a 4-barrel carb (brand new technology 4-byte-wide DRAM controller) for afterburners, added a supercharger to get enough fuel to the carb (like the Camaro's twin fuel feeds, called Burst Mode RAM circuits), and enough high octane gas to feed it: 8 Megabytes of memory, which adds to whatever memory is in your machine. (For instance, a Mega 4 can become a kind of "Mega 12"). Designing the SST was fun for me personally, for we made the same decisions I made with the LS-6Camaro; we went for maximum performance possible. It's not surprising we followed the engineering principles for high speed that people like Kelly Johnson (SR-71A Blackbird chief designer) used, that the Chevy Big Block design team used (many people, I wish I knew the engineers' names); they're time-tested and proven.

There's an old racing proverb: "Speed costs money. How fast do you want to go?" Computers with speeds rivaling that of SST cost beaucoup bucks! Yet with SST, we deliberately used parts in the design whose price has been hammered down by intense competition in the PC and Mac arenas, and managed to keep the price reason-

able for the performance; we targeted "under a thousand dollars" at spec time, yet came in at \$599 retail for the bare essentials!! Atari computers always were "Power Without The Price"; we like to think we've given you a product along those lines, that you can afford, compared to anything else.

I would like to share my dream, the SST, with you, to let you have a 1990's Mega ST. You can order the SST configured your way, at the speed or price, you can afford. Then you can upgrade.

You see, the ST is fundamentally a pretty good design for 1984, when it was laid out. However, it is lacking in a few things that the 1990's require of a machine, namely horsepower and memory. The SST brings your ST into the 1990's in very fashionable style. (The third requirement, High Resolution Color Graphics, is also on the way, from Gadgets and other manufacturers; the fourth, Networking, is what our MegaTalk product is all about.)

Oh, yes, the SST does "warp drive"; Jamie would be proud (if he understood it). For instance, SST RAM can run a program that is 8 million "bytes" long in around half a second (that's 7 double-sided floppy disk's worth!). It would take an ST around 12 times longer to do that, but heck, the ST couldn't hold such a large program to begin with!

Believe me, if you're doing something that makes the computer work hard (desktop publishing is usually a biggie), you are going to really sit up and notice the SST! It still surprises me, and I often "drive" a Mac IIx, one of Apple's fastest!

You know... sometimes I drive The Van to pick up the kids from school, and Jamie hopefully shouts "Warp Drive!!!". But nothing happens if I push on the gas pedal, and he is disappointed. The look on the face of a disappointed three year old is very expressive. Similarly, I have to drive 8 MHz ST's from time to time, and I know just exactly how Jamie feels! Sure, The Van gets there and home again allright and can hold the kids, too.

But I tell you...

... I would rather be driving my Camaro, and the SST. Or an SR-71.

Apple Unveils Newton Technology at Summer Consumer Electronics Show

Chicago—May 29, 1992. Apple Computer, Inc., today provided the first glimpse of its Newton technology, the core of Apple's first major new product line since the popular Macintosh personal computer was introduced in 1984.

Newton devices shown at the summer Consumer Electronics Show fall into an emerging new class of products that Apple calls Personal Digital Assistants—devices that use digital technology to bridge the gap between personal computers and consumer electronics.

Newton is an entirely new technology from Apple that will be the basis for a broad array of new products. To assist in the proliferation of Newton technology, Apple is licensing Newton to selected vendors to use in their own versions of Newton devices. Last March, Apple announced such a relationship with Sharp Corp. of Japan. Sharp has licensed Newton technology from Apple for its own future products, and will also jointly design and produce the first commercial product version of Newton technology for both companies, due out early next year.

The first Newton products will be electronic notepads that intelligently assist the user in capturing, organizing and communicating ideas and information. These products will be small, portable devices that allow freeform note-taking, drawing, calculating, scheduling, and communicating. Newton's revolutionary new hardware technology offers performance capabilities similar to a high-end personal computer, and because of its unique software environment, is very easy to learn and use.

Groundbreaking technology from Apple has been under development for more than four years and has provided the basis for a number of core technologies in Newton.

Newton Intelligence. Newton will actively assist users in their day-to-day tasks. As the device is used, it will learn more about the user and actually propose solutions to help them work more efficiently. For instance, if a user wanted to schedule lunch with Jane, they would simply write lunch Jane Thursday. Newton technology would know that lunch normally

means noon, and that Jane in the individual's address book is Jane Green, and that Thursday probably means this Thursday. A Newton device would then suggest this to the user, by opening their calendar to Thursday and scheduling lunch from noon to 1 p.m. with Jane Green.

Recognition Architecture. The goal for the recognition architecture is to make using Newton products as easy as using a pencil and paper. Newton products will be able to read a user's handwriting, transform it into text as they write, and quickly refine and scale drawings or sketches. Newton technology allows the user to write in a natural and freeform manner because it does not limit the user to writing in boxes or on lines on the screen surface. This Newton technology is different from other pen-based operating systems because it is based on the simultaneous use of several recognition technologies, rather than forcing the user to choose one at a time. The benefit to the user is a higher recognition factor and greater adaptability to personal style.

Information Architecture. Newton devices will provide users with a single repository for all of the little pieces of information they would typically accumulate in various forms (phone numbers, business cards, directions, meeting notes, birthdays). Because of the advanced object-oriented data structure, Newton products will then allow users to organize the information so that they can easily access it in any variety of ways. For instance, a user could view the information for everything that relates to a specific client, a specific week, or a specific subject such as Jane Green.

Communications Architecture. Newton technology was designed from the ground up to take great advantage of communications. These new products will foster easy communications between various Newton product users in meetings,

on the street corner, or during lunch. Newton devices will have built-in wired and wireless communications capabilities. For instance, two Newton users could compare calendars or exchange business cards. Newton users could also fax a letter, check electronic mail messages or connect to a satellite news service to obtain current news or stock information.

Hardware Architecture. Newton technology is based on a new breed of powerful RISC processors optimized for high performance, low power consumption, and low cost. The RISC processor Apple has chosen, the ARM 610, gives Newton products the equivalent power of leading desktop computers, yet consumes less battery power than a small flashlight. In addition, the Newton architecture allows users to add intelligent cards to increase the amount of information the products can access and store as well as add more specific functions. Both Apple and third party companies will provide a variety of intelligent cards to give users choices for specific needs.

The first group of a number of major companies have announced support for Newton technology and have committed to development of future complementary products. Representing many industry segments, the range of products expected will be focused in the general areas of 1) communications products-to enhance the use of Newton devices in a mobile environment; 2) content products-to offer users a wide spectrum of interesting and personal information for their Newton products; and 3) compatibility-allowing users to use Newton devices easily in parallel with existing computer systems. Motorola, Pacific Bell, Random House, SkyTel Corp. and Traveling Software, Inc. made announcements in conjunction with Apple.

The first Newton product from Apple will be available in English-language versions in early 1993. Newton-based products from Sharp Corp. are also expected to be available then. Pricing will be announced at the time of delivery.

The wait is over.

Calligrapher

The Ultimate Writing Machine.

It's been a long time coming, but world-class word processing has finally arrived for Atari computers! Calligrapher combines desktop publishing features (like scaleable fonts and built in graphics) with an intuitive, easy to learn word processing interface. The result is a uniquely powerful and infinitely flexible tool—the only writing tool you'll ever need!

CodeHead 
TECHNOLOGIES
P.O. Box 74090 Los Angeles, California 90004
Tel 213-386-5735 Fax 213-386-5789

Working Title US, a division of CodeHead Technologies, is the official importer of all Working Title products.
Contact us for details about our special offer to trade up from other word processors.

by Gary L. Estler

The Gadgets by Small Accelerator

Back in January of 1991, I became excited by news that Dave Small was considering a project to attack the relatively slow speed of the Mega 4 computer. Since my previous experience with the Smalls (the Spectre 128 Macintosh emulator, which after several upgrades, became the Spectre GCR) was more successful than I could have hoped, I immediately sent in a reply card telling Dave that I would buy his accelerators as soon as it became available.

But, to the bottom line. A year passed before the accelerator (now called the SST) was shipped. The performance improvement it provides is amazing. However, it has taken me almost two months to get my system halfway back to normal and the frustration I went through in the process had me considering returning the accelerator. Now, I'm glad I "took the plunge" but hope that I can save others some of the difficult times I had.

The Story Begins

The configuration of my system consists of a Mega 4 computer with TOS 1.4 installed, an SM124 monochrome monitor, an SLM-804 Laser Printer (with the "Phantom of the Laser" modification—another product I can highly recommend), and a Supra 30-Meg hard drive with a chained Supra (44-Meg Syquest) removable drive.

The SST module requires you to replace the Motorola 68000 chip in your computer with a 64-pin socket into which the SST board is inserted. (Note: one of Small's nice provisions is a new Motorola 68000 chip, which can be plugged into the new socket in the event you later have need to return to your original configuration). The SST is offered in several configurations that increase in cost as the capability increases. The basic SST gives you the socket and accelerator circuit board but lets you save money by procuring your own 68030 and memory chips. (Another Small "nicety"—with the SST, expansion of your computer's memory is as simple as plugging in one-meg SIMMs). The top of the line includes a 68030 chip with a clock rate of 33-megahertz, a Motorola 68882 math coprocessor, and eight 1-Meg SIMMs. That configuration turns your sleepy old Mega 4 into a blazing Mega 12!

Another nice surprise with the SST was the inclusion of TOS 2.06 EPROMs on the SST board. This, the software "extras" that come with the accelerator, and the additional speed provided by the SST hardware, makes for a very capable package.

The Excitement Begins

When I received and opened my package from Gadgets, I found a certificate, which was the Small's way of thanking their SST customers for being patient during their one-year wait for the accelerator. (That looks to me like a Sandy Small idea; if Dave had thought of it there would have been some sort of comment about Nikola Tesla on it).

Anyway, I opened the package and took note of the quality of the board. It is obvious that great care was taken to make a professional product. (I expected nothing less after my fine experience with the Spectre GCR).

Forcing back the urge to get right to work with the SST, I began reading the manual that came with the package. In typical Dave Small fashion, the manual is, for the most part, very readable (except for a few areas where I believe he got much more technical than was really necessary) and quite entertaining. (Yes, Dave; I did get choked up when you told us about the pride you felt on your son's acting debut).

Unfortunately, as I later found out, the instructions, which were absolutely necessary for an easy transition to the SST, were interrupted several times by his entertaining stories and that made it a bit difficult to find critical information quickly when I needed it. For this reason, I'm including a single table (Table A) that succinctly lists what I believe are the most critical steps in the process.

At this point I need to mention one of the most beneficial items that was included in the SST package—a certificate for half off the cost of SST installation by George Richardson (the Merlin Group, Inc. of Kearny, New Jersey). That was important because, in spite of the very detailed instructions in the SST manual, the job is not for amateurs (except those who don't mind destroying either their Atari computer or their brand new, and not cheap, SST).

The result was that I packaged and shipped my computer and SST to George on a Saturday and had it back in my hands by the following Thursday. That speed is amazing when you consider that I not only had George install the SST but I also had him adjust my Spectre GCR to better match my 3.5" disk drive, install a better power supply into my computer (something I had intended to do but it was *not* required just because of the SST), and also make a modification to

better allow the SST to work with my hard drive configuration.

The Frustration Begins

Little did I know at the time what I was in for at this point. As I raced to reinstall my computer, I could hardly contain my excitement. You can imagine how I felt when, as I tried to boot up with the disk provided with the SST, I saw my computer lock up very shortly into the boot process.

Here was another payoff from having George Richardson do the installation for me. (If I had done the installation myself, at this point I probably would have started tearing open my computer and re-doing the entire installation). I called George and he first assured me that my machine had gone through all the hardware tests with flying colors. Next, he took time to discuss my setup and gave me a setting correction that fixed the boot up problem.

Okay! I now had a successful boot from the floppy drive. I reset my configuration, copied the appropriate AUTO folder contents onto my hard disk, and tried to boot from my hard drive. What I got was a video lockup before I ever got to the desktop!

After several iterations, booting from floppy then using Supra's back doors to boot the hard drive, I finally figured out that the versions of *Universal Item Selector III* and the CodeHead's *G+PLUS* that I had are not compatible with TOS 2.06. (I have since sent for upgrades to the current versions of both those programs and hope that they will fix the problem).

I removed those "offending" programs and, lo and behold, I got to the new TOS desktop! The elation started again as I double clicked on *WordPerfect*, opened an existing document, and saw unbelievable speed in screen refreshes and scrolling. The feeling was short lived, however, because I experienced another video lockup when I tried to print the document.

After rebooting and going back into *WordPerfect*, I learned that I also locked up whenever I tried to quit the program. Several iterations of booting and opening programs quickly proved that any 'quit' action caused the same lockup. It was during this process that my root directory became corrupted. Luckily, I had a relatively recent set of backup disks so I was able to recover by taking the time to zero my C: partition and reinstall the backup.

Now you can understand my frustration level as I poured over the manual trying to find—between all of Dave Small's entertaining dialog—the answer to what I might be doing wrong. The closest thing I could find to a possibility was his comment concerning uncertainty about the effect of various versions of Supra's hard disk utilities and the recommendation to use version 3.43.

Aha! I called up the *Suputil.prg* which I used to set my hard drive's autoboot and discovered it was version

3.11. Sure that I had the answer, I spent a considerable amount of time the next day trying to get through to the Supra technical assistance number. (I have used them before and they have always been extremely helpful and responsive).

Again my elation was short lived as the technician I talked to informed me that he didn't know what I was talking about; no "Version 3.43" exists. He did promise, though, to send out a copy of the latest version of their utilities with the assurance of his engineers that they would work with a 68030 chip.

I guess it is a statement about my luck but, two weeks later, I still hadn't received the up-dated disk. I again called Supra and they checked their records to ensure that a copy had been sent. Since it was obviously lost in the mail, they promised me they would immediately send out another copy. Good to their word, they sent the second disk and I received it a few days later.

Back to Square One

I eagerly loaded the Supra disk only to discover that the latest version of their utilities contained no changes to *Suputil.prg*! Version 3.11 is still the current version.

At this point I decided to get around the problem (something I probably should have done in the first place) by seeing if the current version (5.XX) of Atari's hard disk utilities were available on CompuServe. Sure enough, they were there so I spent the one-half hour of on-line time to download those with my ancient (1200 baud) modem.

You will understand why I don't gamble when I tell you that, after the half-hour of on-line time, I discovered that I could not decompress the downloaded file with any version of software I had. Assuming it was due to a corrupted download, I went through the decompression process again with exactly the same result.

Still persistent, I then searched CompuServe for a newer "LZH" utility. I downloaded it (luckily it was a self-extracting file) and was finally able to decompress the hard drive utilities. I then used the Atari file to set the autobooting for my hard drives and tried to restart.

Voila! Success! I was able to boot from my hard drive, open a program, use it at blinding speed, and close it just like I was supposed to be able to do.

Still a Problem

Getting really adventurous now, I decided to try to load my favorite utility—*Neodesk 3.0*. Unfortunately, as I monitored the boot process, I saw the old lockup recur. After some investigation, I isolated the problem to the *Neo-queue* and *Neo Control Panel* accessories. Running either makes the computer crash before reaching the desktop. My only solution to date

has been to remove these two accessories and do without them—hardly a final fix.

Printing with the Laser

The last problem I noted was with the use of my SLM-804 Laser Printer. Although my attempts to use it in the Macintosh mode (using the Spectre GCR) met with the same level of success as was the case before SST installation (i.e., the output was printed as that of an average-quality nine-pin dot matrix printer), attempts to load the required Diablo emulator program gave me a dialog which indicated the system could not detect the SLM-804.

A phone call to Sandy Small led me to try putting the *Diab630.prg* file as an early entry into my AUTO folder. This fixed the problem and printing—even from *PageSteam*—is unbelievably fast.

Success at Last!

I am now running almost normally with the exception of the problems with *G+Plus*, *UIS III*, *Neo-Queue.prg* and *Neo-Control.prg*. The final order of programs in my AUTO folder is:

AUTOMMU2.PRG
CLDBOOT2.PRG
QUICKSTM.PRG
GDOS.PRG
DIAB630.PRG
MACCEL3.PRG
NEOLOAD.PRG

RAM2133.PRG (or equivalent for your SST)

(I would add *DISKXX.PRG* after *RAM2133.PRG* if I had set the autoboot on my hard disk with either the Supra utilities, ICD utilities versions 5.2-5.4.2, or Atari HDX 3.)

As I said in the beginning, I am pleased by the final state of the SST accelerator and the speed enhancement it provides to my system. I only wish the process had been less painful and time consuming. When I last talked to Gadgets about the problems I was having, I was told that they would have one of their Beta testers get in touch with me. That call never came. I am a fan of the Smalls and their endeavors to improve the lot of us Atarians. I am also displeased with the agony and isolation I had to experience.

Finally, Some Hints

To get around the difficulty of finding information in the packed (and entertaining) SST manual, I have attempted (in Table A) to synopsise the steps I would have taken in installing the SST had I known then what I know now. Since each configuration is different, I have tried to make the list as generic as possible. I won't duplicate all the safety warnings in the SST manual; suffice it to say that the operations have the potential to be extremely hazardous to you, your

equipment and your data so carefully read and heed all the safety information that's there.

Summary

I can't tell you whether or not the SST is the best choice of the available 68030 accelerators since I have not seen, tried, or priced any of the others. I feel the only way to determine which is best is to put two machines (each with a different accelerator) side by side and then attempt the same operations on both machines. If that's not practical, I can only say that the Gadgets by Small SST is a great device; but be prepared to have your patience and persistence tested.

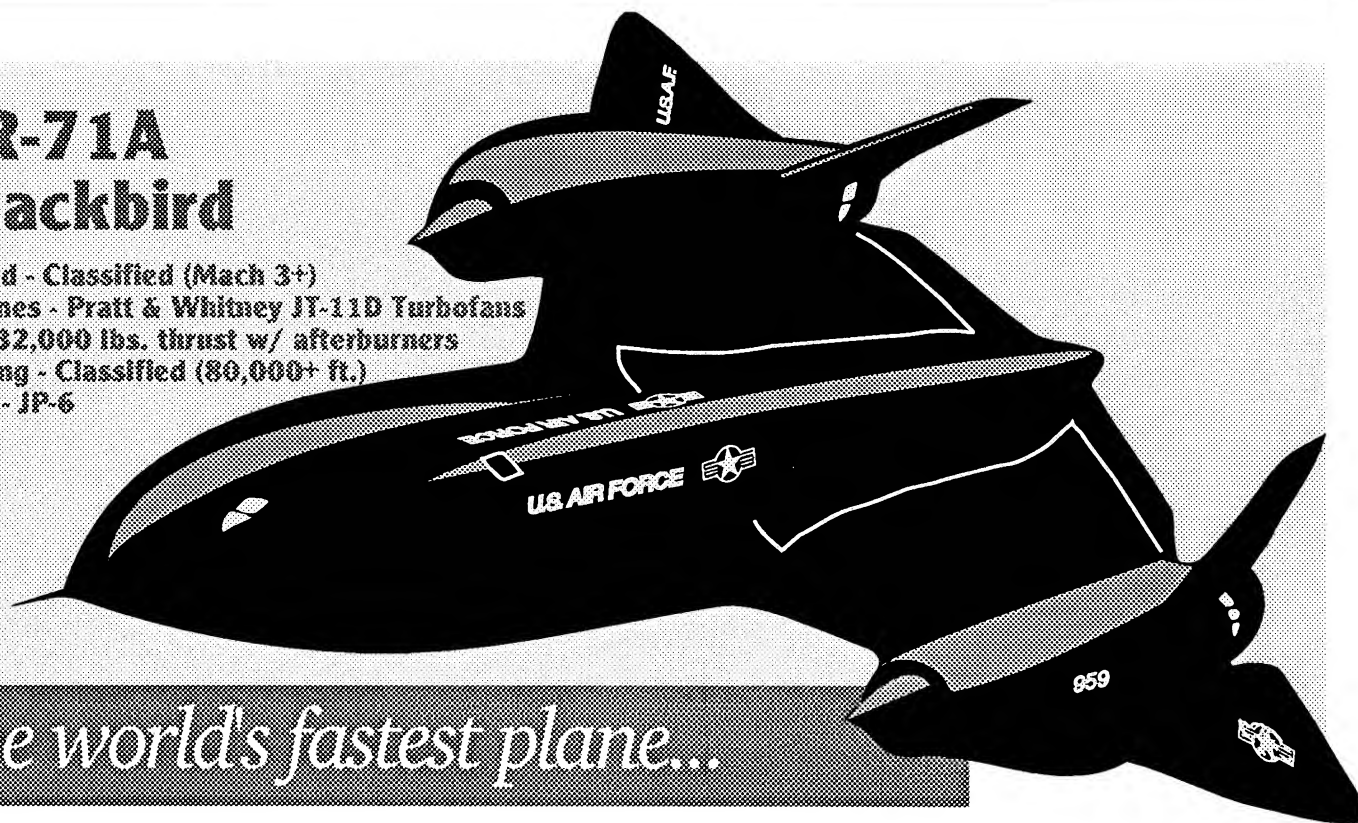
Table A. Steps to a Happier Experience

1. Remove all programs from your hard disk's AUTO folder and delete that folder.
2. Turn off your hard disk's Autoboot function then back up the root directory (as a minimum) of your hard disk.
3. Make a backup (working) copy of the disk that is shipped with the SST. Turn off your Mega's blitter chip selection and the save the desktop configuration onto the working copy of your SST disk.
4. Set up an AUTO folder on your SST floppy (working copy) with the files in the order I used for mine (as described above). If you do not own an SLM-804, you can omit the GDOS.PRG (at least for now) and DIAB630.PRG. Make a second copy of that disk.
5. Disconnect your computer and, following the instructions in the SST manual, install (or have installed) the SST. If you are doing this yourself, do not yet re-attach the computer's shield or cover.
6. CAREFULLY power up your open computer and boot from the working copy of the floppy disk. If the machine boots, rename RAM3333 as TEST3333 and run it in accordance with Small's manual. If all goes okay, close up your computer.
7. Use the TST3333D and the TST3333 files to test your burst mode and normal wait states (as described in the manual.)
8. Add any additional desired programs to a copy of your working disk AUTO folder one at a time. Try to boot off your floppy; if not successful, reboot off the previous copy of the working floppy disk.
9. Once all the programs you want in your AUTO folder have successfully loaded from the floppy disk, boot your hard disk, enable Autoboot (using an ijaap-proved" version of hard disk utilities), copy the AUTO folder from the floppy disk into the root directory of the hard disk, and attempt to boot from the hard disk.
10. Once that has been successful, run some of your favorite programs and see what the speed increase is.
11. Run the PRGFLAG program as described in the SST manual to set fast load, SST load, and memory request parameters for the various programs you use the most.
12. Back up your newly-configured hard disk.
13. Enjoy the fastest Atari computing available!

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| Esteem Pilot | \$69 |
| Hisoft Power Basic | \$59 |
| Laser C | \$99 |
| Laser C Debug | \$49 |
| Mark Williams C | \$99 |
| Lattice C v.5 | \$189 |
| Personal Pascal | \$79 |
| Hi-Speed Pascal | \$139 |
| Devpac ST | \$59 |
| Devpac TT | \$179 |
| Assempro | \$59 |

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|------------------------|------|
| Atari ST Book (#1) | \$14 |
| Atari ST Subjects (#2) | \$14 |
| Atari Advanced (#3) | \$14 |
| C-Manship Complete | \$29 |
| Assembly Language | \$29 |
| GFA Basic Guide | \$3 |
| Basic to C | \$18 |

8 Hardware!

Portfolio Products

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|--------------------|-------|
| Portfolio Computer | \$239 |
| Serial Interface | \$59 |
| Parallel Interface | \$39 |
| 64K RAM Card | \$79 |
| 32K RAM Card | \$59 |
| 128K RAM Card | \$159 |
| Portfolio Book | \$14 |
| AC Adapter | \$10 |
| Terminal Plus | \$39 |
| Hyperlist | \$49 |
| Power Basic | \$89 |
| Instant Speller | \$39 |
| Chess | \$49 |

Modems & Related Items

| | |
|-------------------|-------|
| Supra v.32 FAX | \$269 |
| Supra v.32bis FAX | \$329 |
| Supra 2400 Plus | \$149 |
| Supra 2400 | \$99 |
| Straight FAX! SW | \$69 |
| Flash Two | \$39 |
| Stealth | \$29 |
| Stalker 3 | \$37 |
| G.I.M.E. Terminal | \$29 |

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| | |
|----------------------|-------|
| Prism Tablet | \$149 |
| Alia Data Mouse | \$36 |
| Alia Data Optical | \$49 |
| Alia Data Trackball | \$52 |
| Alia Cool Trackball | \$69 |
| Gold. Ing. Mouse | \$45 |
| Gold. Ing. Optical | \$69 |
| Brush Mouse | \$79 |
| Cordless Trackball | \$94 |
| Kraft Trackball | \$59 |
| Wico Bat-Handle | \$22 |
| Wico 3-Way | \$25 |
| Wico Ergostick | \$16 |
| Gravis Advanced | \$36 |
| Atari Standard Stick | \$8 |
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| Migraph TRAY! | \$119 |
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| G.I. 720K Drive | \$149 |
| DVT VCR | \$69 |
| JRI SIMM Board | \$109 |
| Alpha Data Clock | \$49 |
| ST Time | \$49 |
| DMA Switchbox | \$59 |
| DMA Cable (3) | \$29 |
| DMA Cable (4) | \$49 |
| PC Speed (ST/E) | \$189 |
| AT Speed 386 | \$349 |
| Speed Bridge | \$59 |
| Monitor Switchbox | \$39 |
| SLM804 Refurb | \$579 |
| SLM605 NEW! | \$1049 |
| HP Deskjet 500C | \$729 |
| Star SJ48 300dpi | \$299 |
| KeySkins | \$21 |
| AdSpeed ST | \$199 |
| AdSpeed STE | \$229 |
| Mega STE 1.44 | \$149 |
| TT030 1.44 Kit | \$139 |

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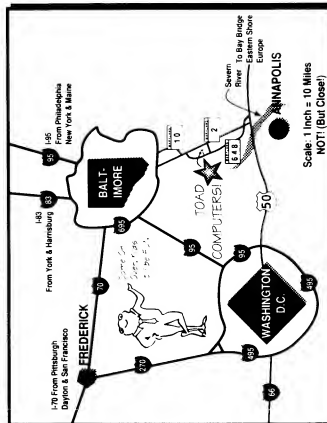
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|--------------------|-------|
| Quantum LPSS2 | \$269 |
| Maxtor LPS130 | \$399 |
| Quantum Pro240 | \$699 |
| Maxtor 130MB | \$389 |
| Maxtor 213MB | \$659 |
| SQ555 Cart | \$449 |
| SQ5110 Cart | \$699 |
| SQ400 Carts | \$75 |
| SQ800 Carts | \$119 |
| 720K Teac DSDD | \$85 |
| 1.44MB Teac HD | \$90 |
| Floppy Drive Cable | \$15 |

Hard Drive Accessories

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| ICD AdSCSI | \$89 |
| ICD AdSCSI Micro | \$89 |

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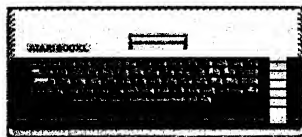
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by Richard L. Reaser Jr.

How Are We Doing on Goals and Objectives?

Summer's Here!

School's out and the summer move season is upon us. This summer I'm moving, too. I'm off to Alabama for a ten-month school and don't have a new address, yet. My family is moving to Southern California and I hope to catch up with them after my school. Don't worry, the post office will forward all my mail and I'll still be on GENie and CompuServe.

In this CN issue, the venerable Charles Cole joins us once again with an excellent review of *BobTerm*. I am not a *BobTerm* user myself, having forked out a fortune for the *Express!* cartridge. However, after reading about some of the *BobTerm* nuances that Charles describes, I may have to give *BobTerm* a shot. Hearing of my hard drive woes, new writer, John Sandgren reviews and compares the various hard drive backup options for the 8-bit this month. John is an Air Force Lieutenant Colonel (he outranks me). He is a member of our local user group and works on several projects on base with me. John will appear again soon on these pages with some helpful hints for *SpartaDOS* users. Finally, Gail Westendorf, who is also a new face, provides an in-depth review of Bresnik Software's *Mathematics*.

I'm always looking for new writers and interesting articles. A number of fascinating pieces are in the works already, but I'm starting to use up my backlog with three articles appearing in CN each month. If you want to take a stab at writing, please get in touch with me.

Mid-year Review

I'm sure you've all heard the old saying, "When you're up to your rear in alligators, you often forget that your original objective was to drain the swamp." The same goes for me and the 8-bit editor job. It seems as if I am continually on the quest for writers, editing articles, checking into the telecommunications services, looking for tidbits, doing research, answering mail, making phone calls—all in support of the next CN issue deadline.

This past week, I witnessed the same kind of thing at work. A sister organization had made a long term commitment to do something and established a framework to get there. When I started to evaluate where they were mid year, they weren't even close. Then it hit me, I may be guilty of the same thing as CN 8-bit Editor! So....

As you probably know, CN publishes 10 issues per year. This is my fifth column for CN, so this is "mid-year" for me. A mid-year review seems appropriate. When I started as 8-bit editor, I set a few goals and objectives for CN Atari Classic coverage and my monthly column. They were:

Goals

- Bring to you the various "worlds" of Atari 8-bit users.
- Structure CN coverage in a way that caters to a wide spectrum of users.
- Stimulate dialog between all the various groups and classes of users.
- Support the 1992 theme "The Year of the Atari User."

Objectives

- Provide support to the most important part your computer system—*YOU!*
- Make this column and the editorship a clearing house for Atari Classic user support.
- Provide answers to questions and problems.
- Show you how to use your computer.
- Bring you the latest news.
- Keep you up to date on new products.
- Publish product reviews.
- Keep you up to date on Atari Classic product sources.

Mmmm! Those were a lot of promises. But then again, this is an election year. All seriousness aside, I think we are basically on track. The most significant weak spot I can see is in the helpful hints for computer users area. Any ideas on this would be appreciated. I have recruited at least one article in this area. Let me know how I can serve you better, or if I am off the mark.

K.O. Distributors Update

Steve Hoffee was pretty ill this past spring, but is feeling better now. Keep him in your thoughts and prayers. Steve's main 8-bit system was also hit by lightning. He bought an IBM compatible, but has now decided he would be happier fixing the 8-bit. Steve's daughter, Stefane, is running Public Domain software distribution for K.O. and will have a new disk-based catalog out this summer with over 50 new titles,

mostly from overseas. The new catalog will make it onto GENie sometime soon.

Steve is still getting commercial software from foreign sources for potential marketing in the United States. His new source is Peru. He tells me he has programs in his possession that are unlike any ever seen here—including a clone of the *Teenage Mutant Ninja Turtles* arcade game. The problem is that foreign expectations in the U.S. market are very unrealistic. Atari 8-bits are going like gang busters in South America, as well as Europe, and people over there can't understand the flatness of the market here. Steve hopes he will be able to negotiate with the foreign sources so we can see some of these items here. Steve also promises to write an article about his experiences with foreign Atari 8-bit developers. We hope to see that soon in CN.

Steve says that there are "cheat" codes for *FRED* and *Mission Shark*. What they are will be a secret for awhile longer. Roger Meston is beaver away at a review of each of these fine games. For further information about K.O Distributors contact:

K.O. Distributors
333 Peninsula Drive
Lake Almanor, CA 96137
GENie: S.HOFFEE2
(906) 596-4159

Apples in Romania

A joint U.S.-Romanian company has obtained exclusive rights from Apple Computer Inc. to market Apple's personal computers in Romania. The Apples will have Romanian-language keyboards, software and instruction manuals.

I ask again, why isn't Atari Corporation picking up on this. I realize that missed opportunities aren't new to Atari, but you'd think that eventually someone would figure this out in Sunnyvale.

Atari Classics 8-Bit Magazine Update

Ben Poehland (the Alchemist) has been working the Publication Manifest for Atari Classics to describe the organization and operational policies of the magazine. Jeff McWilliams is still receiving postcards. The final tally should probably top out at about 600. If you haven't mailed in your card yet, please do. With any luck, Ben and Jeff hope to have Atari Classics' premier issue out on the streets this fall.

Another XDM121 Printer Source

You may recall my raving about the Atari XDM121 Printer last month. I failed to mention that it is also available for the same low price of \$49.00 at:

B&C ComputerVisions
2730 Scott Boulevard
Santa Clara, CA 95050
(408) 968-9960

GENie and the Internet

Activity on GENie was light this past month. I have a lot of things I wanted to discuss this month about the Internet, but I am running out of space. Oscar Fowler has consented to write an Internet article for CN and I am looking forward to that. Oscar is selling off his 8-bit stuff in the meantime, which saddens us all.

CompuServe

Pattie Snyder-Rayl from *Atari Interface Magazine (AIM)*, hosted a real time conference in May with guest speakers Jeff Potter and Bob Puff. Here are some of the highlights. Bob Puff indicated that he had spoken with ICD briefly concerning the rights to their products, but he didn't have the capital to invest in what they were looking for at the time he inquired. He thought that ICD will probably be holding on to their products for awhile. Jeff Potter said he was in the "market research" phase of working on a program to send and receive faxes. Bob Puff also mentioned that Alfred (author of *AlfCrunch*) is considering a hard-disk/upgraded memory version of *Synfile*.

Ray Wilmott has uploaded an updated list of Atari 8-bit sources on CIS, which should be of interest to most of us.

Maze of Agdadon

As I promised last month, here is an update on *Maze of Agdadon*. Jeff Potter is now the principal force behind the effort. Jeff is a Systems Engineer at General Electric when he's not tinkering with his Atari Classic. He's the author of APAC View, which allows Atari 8-bits to view Amiga and ST graphics. He's also programmed a Graphics Interchange Format (GIF) encoder for *Micro Illustrator* and Graphics 8 and 9 pictures.

The idea for *Maze of Agdadon* started around Christmas in 1990 on GENie. Atari Corporation has had a *MidiMaze* Game "on the drawing boards" for the Atari 8-bit, but never came through. *MidiMaze* is an outrageous program for the ST. If you haven't played it, you're really missing something. The concept is that you hook a bunch of computers together and wander around a maze and kill other players—all in real-time. The mastermind for the independent 8-bit effort was Chuck Steinman of DataQue.

Initially a group on GENie devised the concept, rules and protocol framework for the program. The idea is to hook up to 16 Atari 8-bits together via the SIO ports. This requires some special connectors. Each computer acts as a player terminal. One computer is the master and keeps track of things. All the other computers boot off the master. The master computer can be a player terminal as well.

The rules are similar to *MidiMaze*. A random maze is generated for each game. Players face forward as if their monitors are their view. Players wander the maze dropping timed hand grenades in hopes of blowing up their opponents. The graphics and sound are integrated. Jeff Potter worked primarily on the graphics.

Jeff has a working one-player version now. The next couple of decisions are whether to go with a cartridge or disk, whether to make a modern version, and whether to make a two-player demo version to get people interested in buying the program. Look for something definitive this fall. Keep the bug in Jeff and Chuck's ear and stay tuned to GENie for further updates. *Maze of Agdadon* promises to be one of the neatest things ever for our Atari Classics.

TextPRO+ Version 5 Update

Ronnie hadn't mailed out the *TextPRO+ Version 5* (TP 5) Beta versions as of June 1st. He still hopes to have them out to registered users by the end of June. He wanted to fix up one last thing. (Anyone who's had a computer programming course knows what that is all about.) Ronnie had only seven free bytes left and had not gotten all the "hooks" into the main program for the "add-in machine language module" feature. His plan is to move the print menu (Ctrl-) out of the main program and make it an example "add-in machine language module." This will aid would-be code writers who wish to develop their own "add-in machine language modules." To keep posted on TP 5, visit the GENie Atari 8-bit Forum, Category 5, Topic 33.

Digi-Studio

Digi-Studio is a new program for 64K Atari XL/XEs only. It was written by Dean Garraghty in the United Kingdom. Dean is also the author of the old *Digital Music Studio* and he frequents the Internet. *Digi-Studio* allows you to play music using real sounds that have been digitized.

Digi-Studio Package 1 comes with a keyboard player and tune player. The keyboard player lets you use your computer keyboard like a piano keyboard. You can have three sounds in memory and can quickly change between them while playing tunes. The *Digi-Studio* disk contains 25 digitized sounds for use with the keyboard player, ranging from church bells, to pig grunts, to a baby crying, to screams, and lots of synthesizer sounds. The tune player allows you to play pre-programmed tunes using any of the available sounds on the disk. Five tunes have been included on the disk for you to play.

Digi-Studio Package 1.5 offers more features for *Digi-Studio* as well as more samples and tunes. *Package 1.5* is available with *Package 1* only. It

contains two additional programs for *Digi-Studio*, the *Sample Editor* and the *Tune Compiler*. Also included are 26 new samples and 18 new tunes for use with *Digi-Studio*. The *Sample Editor* allows you to edit existing *Digi-Studio* samples, and also allows you to create your own by using a joystick. The *Tune Compiler* creates stand-alone Basic program modules for including *Digi-Studio* tunes in your own Basic programs. The modules are self-contained and do not require any *Digi-Studio* program to play.

Digi-Studio Package 1 costs 7 pounds for U.S. orders, including printed manual, and shipping. All payments must be made in UK funds (pounds sterling) and paid by International Money Order (IMO) in sterling if you are ordering from the U.S. *Package 1.5* is not much use on its own, so it is sold along with package 1. The two packages together will cost 10 pounds (UK sterling paid with IMO) for non-UK orders.

Dean is looking for someone to market his program in the United States. He is also sending me a copy of it so that it can be reviewed in CN. A demo, news release and order form can be found on GENie in file #5869. For further information contact:

Dean Garraghty
62 Thomson Ave
Balby, Doncaster
DN4 0NU, ENGLAND.
Internet: djg0-aberystwyth.ac.uk

TurboBASIC Programming Kit

The Ol' Hackers Atari User Group (OHAUG) has released a three-disk floppy package for *TurboBASIC*. I just received it and gave it to Chuck McBride, a veteran *TurboBASIC* programmer who will put it through its paces and do the review for CN. At first blush, it looks to be excellent. The package is public domain and available from OHAUG for \$7.00. Send your orders to:

Ol' Hackers Atari UG., Inc.
c/o Alex Pignato
3376 Ocean Harbor Dr.
Oceanside, NY 11572
Make checks payable to "Ron Fetzer."

That's it for this month. Write, call or E-mail your requests, questions or complaints to:

Rick Reaser
4625 Whimsical Drive
Colorado Springs, CO 80917-3120

GENie: R.REASERJR1
CompuServe: 72130,2073

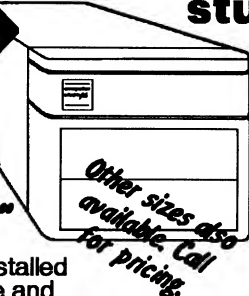
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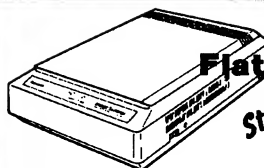
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Backing Up Your 8-Bit Hard Drive

Picking Up Where the Pussycat Left Off

by John H. Sandgren (GENie: J.SANDGREN)



John Barnes (the Junkyard Pussycat) has recently completed a series of articles that provided some pretty useful ideas about data security and backing up our hard drive files. [Editor's Note: See CN Jan/Feb, Mar, Apr, and May 92 issues. -RR] What John left out, however, is a product review of backup programs for the Atari 8-bit. Yes, I suspect the number of 8-biters who have hard drives is somewhat limited, but for those of us who have upgraded our systems to include hard drives, the issue of backing up our important files is just as important as it is to the 16-biters. So I've taken on the task of completing the Pussycat's set of articles and providing a review of what's available in the 8-bit world to back up our hard drives.

What's Out There?

My search for appropriate programs to test and review initially uncovered five programs. Three of them are public domain, available on GENie and CompuServe (CIS). Two of them are commercial products available directly from the retailer/developer. But when I started using the programs, one program, *HDBACKUP*, dropped out immediately-I couldn't get it to work. At least, I couldn't get it to work in my limited testing environment. Rather than explore why the program wouldn't work for me, I devoted my energies to exploration of the capabilities and features of the remaining four programs.

Testing Environment

There was no way I was going to sacrifice my hard drive and my files just for the sake of this article, but somehow I had to run each program through its paces. The route I chose was to use my 3.5 inch converted XF551 drive to fill in for a small hard drive. I figured if I could operate the programs using this pseudo-HD, then the programs would work on a real hard drive. For a Disk Operating System (DOS), I used my all time favorite, SpartaDOS X Cartridge. I've used MyDOS on occasion, and at least one of the programs claims to work with MyDOS, but since I know and trust SpartaDOS X, and all my files are in SpartaDos format, that's the DOS I used. If MyDOS is your DOS of choice, I suggest you experiment with these programs in a similar manner before committing your important files to a questionable fate.

What's Important?

So, what do I think is important in a backup program? Is it time consuming to use? Does it let me

take advantage of the double-side capabilities of my floppy drives, and will it let me use the 80-track capability of my 3.5 inch drive? Are there any special features that make the program more user friendly? And, of course, how much does it cost?

As our illustrious 8-bit editor will tell you, the amount of time available to backup files is inversely proportional to the importance of the files needing backup. Rick Reaser has spent hours and hours trying to recover files that he could have (should have?) backed up. [Editor's Note: I resemble that remark!! --RR] Oh well! Maybe Rick will find the answer to his needs in the paragraphs that follow. Each of the tested programs consists of a backup program and a companion program to restore the backed up files to the source disk.

FATBACK

The first program I looked at was a public domain program called *FATBACK* (and *FATREST*). It can be found on GENie and CIS. [Editor's Note: I couldn't find it on CIS, so I uploaded a copy myself. --RR] The price is right-free. At least I couldn't find any caveat for shareware in the DOC file.

This program operates under the assumption that if something is going to screw up on the hard drive, it will be the directories. *FATBACK* reads the boot sector, then creates a backup file containing only the directories/subdirectories and the bit sector map. The latest version 1.1 gives you a speedier option to only backup the directories, but since the companion restore program gives you the option of selectively restoring only the directories, or even selectively restoring files directory by directory, it only makes sense to do the full backup. The time saved may not be worth it. Restoration of the bit sector map is not recommended by the author of the program, however.

When I tested this program, I restored the directories to a freshly formatted, blank disk. The restored disk was a duplicate of the original, missing only the files themselves. I was impressed!

This is the program I plan to run after every session on my computer, just before shutdown. It's quick, it's easy, and why not take advantage of the protection it provides. If more than a screwed up directory is causing me to lose access to a file, very little time would be wasted, and the chance that a directory rebuild will solve the problem makes this a program of choice. But note that it only works with SpartaDOS.

ALFBACK

The second program I looked at is also public domain software available on Genie, called *ALFBACK* (and *ALFREST*). Unlike *FATBACK*, this is a full backup program, saving both directories and files to the backup disks. This program formats the receiving disks, but only allows single-side choices, and you can't pre-format disks to take advantage of any double-side capabilities your hardware might provide. That's the major disadvantage of this program.

On the other side of the coin, the program has plenty of features that make it a best buy for the money! It splits files across disks, so you don't waste space on the backup disks; allows you to selectively backup a subdirectory, or the entire disk of files; and allows you to selectively restore a specific directory, even if you backed up the entire drive. The files it saves to the backup disk are complete, and fully recoverable on a file-by-file basis. This is a distinct advantage when you need access to a single file, and could replace any need to maintain duplicate copies of favorite files, since the backup file acts as a complete duplicate of your hard drive contents.

When I tested this program I restored the complete disk of files to a blank, formatted disk. The restored disk was a complete duplicate of the original-files, directories, subdirectories and all! If this program had more options for formatting the backup disk, or allowed you to pre-format the backup disk, it would be my choice for a no-cost backup program to use at least once a month, whether I needed to or not. Note that this program, too, only works with SpartaDOS!

FlashBack! by ICD

Now we get into the commercial offerings. *FLASHBK* (and *RESTORE*) is the backup program offered by ICD to support their MIO customers. It's easy to use, has a very good menu, is chock full of options, and is reasonably priced at \$14.95. This program will format the backup disks, but unlike *ALFBACK*, it allows you to use pre-formatted disks if the selections don't meet your needs.

When I say it's chock full of options, I mean it. This program provides a menu with no fewer than three save options: you can back up files according to whether the archive bit indicates it was changed or modified since last save; you can backup files according to whether they were created or changed since a certain date; or you can do a complete back up of all files/directories.

Using the archive bit option or the file date option does have its limitations, though; when you back up the source drive using one of these shortcut options, you always add to the backup file. In the event you ever have to restore the drive contents, you are liable to

restore even those files that you previously deleted from your hard drive. A selective file restore capability helps you bypass unwanted files during the restoration activity, but the restore then takes more time, and operator input is necessary to indicate whether each file should be restored or not.

A second limitation of using the archive or file date options is that if the additional saved files overflow onto an additional backup disk, that disk must be available already formatted-you can't use the program's format capability in conjunction with these options. *FlashBack!* will split files across disks, and the files it saves are complete and separately copyable from the backup disk file-by-file.

When I tested this program, I restored a duplicate of the original to a blank formatted disk. Like *ALFBACK*, the restored disk was a complete image of the original. This is a proven program from a first rate company. Note: works with SpartaDOS only!

Hard Drive (HD) Pro Backup by CSS

The final program I tested is *HD Pro Backup* (*BACKUP* and *RESTORE*). This copy-protected program is a new offering from CSS to support their new Black Box, and is truly the Cadillac of backup programs for the Atari 8-bit computer. Completely menu driven, *HD Pro Backup* offers no fewer than four types of backup, a complete choice of source and destination drives, a selection of paths to back up, a data compression option (with and without screen blanking for faster processing), and several options for printing out a catalog for files processed. However, all this glamour has its price. For instance, the user's manual clearly announces, "You must use good diskettes. The backup files are not stored as DOS files, and the backup/restore programs will not tolerate bad sectors on the floppy disks." And in the discussion of the compression option the manual warns you, "Use of data compression will result in a space savings of approximately 30%, but will add substantially to the program execution time."

For me, the fact that individual files are not accessible from the backup disk, as they are with *ALFBACK* and *FLASHBACK*, is a significant drawback to this otherwise exceptional program, and as John Barnes discussed in one of his fine articles, the low cost of floppies just doesn't make data compression, and further lack of unaided access, worthwhile. Also, the copy protection requires you be particularly careful not to accidentally overwrite the disk like I did during my testing. But on an up key, this is one program that fully supports MyDOS users!

Conclusions and Recommendations

The accompanying table summarizes the most important features of the programs I have reviewed. Having lost access to my hard drive while in the

Table 1: A Comparison of Program Features

| Features | FB | AB | FB | HD |
|----------------------|-----|-----|------|------|
| SpartaDOS Compatible | Y | Y | Y | Y |
| MyDOS Compatible | N | N | N | Y |
| Formats disks | N | Y | Y | Y |
| Copy directories | Y | Y | Y | Y |
| Copy subdirectories | Y | Y | Y | Y |
| Copy files | N | Y | Y | Y |
| Split files | N/A | Y | Y | Y |
| Use archive bit | N/A | N | Y | Y |
| Use file date | N/A | N | Y | Y |
| Compress files | N/A | N | N | Y |
| Menu driven | N | N | Y | Y |
| Author rating | B | B | A | A |
| Price | \$0 | \$0 | \$15 | \$55 |

Source(s):

FB = FATBACK: GENie, #3299; CIS, FATBACK.ARC; public domain.

AB = ALFBACK: GENie, #3270; CIS, AALFBACK.ARC; public domain.

FB = FLASHBACK: ICD, Inc., 1220 Rock Street, Rockford, IL 61101-1437. Phone: (815) 968-2228. \$14.95.

HD = HD PRO: Computer Software Services (CSS), P.O. Box 17660, Rochester, NY 14617. Phone: (716) 429-5639. \$49.95 +\$5 s/h.

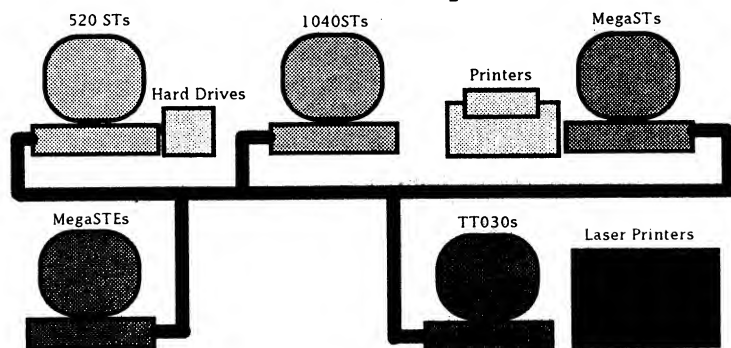
middle of this project, I can personally attest to the value of accessing individual files from the backup disks. Until my hard drive comes back from the repair shop, those backup disks are my primary source to selectively rebuild a boot disk for what remains of my computer system.

All four of the programs work as intended. All four are easy to use, although the programs that let you pre-format backup disks prove best for my circumstances. And the freeware status of *FATBACK* and *ALFBACK* certainly make them attractive to frugal enthusiasts like me.

All in all, I think a combination of *FATBACK*, and either *ALFBACK* or *FlashBack!* is the best approach for SpartaDOS users. Back up your directories at the end of every session using *FATBACK*; then do a full backup with *ALFBACK* or a full, archive, or file date backup with *FlashBack!* once a week, or once a month, whichever is best for you. For you MyDOS users, *HD Pro Backup* is surely the only way to go.

[Editor's Note: *HDBACKUP* is on both GENie (File #3303) and CompuServe (HDBACK.COM and HDBACK.COM). If someone out there has gotten this program to work, please contact John Sandgren or me. Maybe we're just dense or something. BTW, our copy was downloaded from GENie. --RR]

Connectivity.....



Universal Item Selector III

Now upgrading to Version 3.3

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Now with Keyboard equivalents for 99% of the UIS functions. Now you can Move, Copy, Rename, Delete, and choose drives all from the keyboard plus more. Now it is easier than ever to use UIS, whether you use the mouse or use the keyboard.

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Select Drives Print/Show Set Paths Lock/Unlock Show RAM

Now show pics and arc files with new DC Show-er link \$24.95

Universal NETWORK

Universal NETWORK has been installed in 223 systems since its introduction in April 1991. The software supports CARtridge, MIDI and LAN port use. Device drivers for all models of Atari 16 and 32 bit computers is included in the package. Expand your computer use with networking. Share hard drives, printers, and plotters, works easily between computers. Total TOS compatibility. There is never an interruption of your work while using the network because Universal NETWORK equips your system with network multi-tasking. The network operates in the background without disrupting foreground tasks. Easy 9 minute installation gets you "up and running" in no time. Use one or more hard drives or printers in the network. MIDnet and LANnet hardware uses standard 4-wire modular phone technology.

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Bresnik Software Mathematics

$$3 \times 4 = ?$$

Educational Drills, Games, & Demos for Advanced Math Students

$$121/11 = ?$$

by Gail E Westendorf

$$2432 - 445 = ?$$

Mathematics is one of six educational disk titles offered by Bresnik Software. The disk description reveals that the disk contains 24 programs, which makes the \$5.95 price (plus \$2.00 shipping) look like a real bargain. But, as we all know, a bargain cannot always be measured solely on cost and quantity. Quality and usefulness are just as important factors.

Documentation

The disk comes with a generic single page documentation sheet that describes how to load any of the six Bresnik disks. The documentation sheet also states that the program documentation will either appear on screen when the program is run or will be on a separate documentation file. It is left to the user to discover how his disk is documented. A quick look at the disk directory showed that *Mathematics* does not have a separate documentation file.

The loading instructions call for booting the program disk with BASIC enabled. A program menu list is displayed from which any of the 24 programs can be selected and run. To change programs the user has two choices, which are not documented anywhere in the program instructions. The first choice is to reboot the computer. The second choice is to enter RUN "D:MENU" at the READY prompt, which reruns the menu program.

What Comes with the Package?

The programs can be divided into three basic categories: Drills and Quizzes, Demonstrations, and Games.

Drills and Quizzes

This category contains five programs: *Exponential Notation Drill*, *Math Quiz*, *Math Quiz 2*, *Math Quiz Decimal*, and *Word Problems*.

Exponential Notation Drill

This drill provides the student with an endless number of problems. The drill provides a number in either decimal or exponential notation and the student must provide the number in the opposite notation. The program keeps track of the percentage of correct responses and displays the correct answer after an incorrect response. The introductory example of exponential notation, however, doesn't show how to write a number less than 1.0; during the drill the student must know how to do this. Also confusing is

the fact that the first non-zero digit of all the problems is set to 1.

Math Quiz, Math Quiz 2 and Math Quiz Decimal

These next three drills endlessly test the student's knowledge of using positive and negative numbers with the arithmetic operators $+$, $-$, $*$, $/$. The first two programs contain only integer number problems and are nearly identical. The major difference is that the first is in graphics 0 mode and the second is in graphics 18 mode. The third drill contains decimal as well as integer problems and is in graphics 18 mode. The correct answer is displayed following an incorrect response and the correct answer must be entered before going to the next problem. All the drills offer the student bonus percentage points for quick responses.

Word Problems

The last drill tests a variety of mathematical skills with word problems. The student specifies the number of problems desired before beginning the drill. The program is quite picky about the format of the responses, which leads to numerically correct answers being counted as incorrect. Correct answers are displayed after two incorrect responses.

Demonstrations

The demonstrations category contains 11 programs: *Prime Factorization*, *Armstrong Numbers*, *Decimal Counting*, *Lissajous Figures*, *Number Guesser* (two versions), *Perfect Numbers*, *Pythagorean Triplets*, *Number Converter*, *Factorials*, and *Change Maker*.

Prime Factorization

This program calculates all the prime factors of a user supplied integer number. No definition of prime factors is displayed. The prime factors and base number can be printed to a printer in addition to the screen.

Armstrong Numbers

A definition of Armstrong numbers is displayed (a number in which the sum of the cube of each digit equals the number). The program searches for and displays Armstrong numbers with the number of digits requested by the student. The search is extremely slow (several minutes) for four or more digit numbers.

Decimal Counting

This demonstration displays a rapid counter on the screen which goes from zero to the highest number of digits specified by the student. The student is challenged to study the program and figure out how it works.

Lissajous Figures

This demo generates x-y plots where $x = \cos$ and $y = \sin$ for random multiples of an angle θ . The plot generation never stops even though the functions create a repeating pattern on the screen.

Number Guesser

There are two number guesser demonstrations that ask for the student to select a number within a range. Based on the answer the student gives to a specified number of greater than/less than questions, his number is guessed. The first program asks for numbers in the range of 1 to 1000 and provides the correct guess after 10 questions. The second program range is 1 to 1,000,000 and asks 20 questions. The only way to fool the program is to lie in response to one of the questions.

Perfect Numbers

This program displays some of the first 19 perfect numbers then requests a number and checks to see if it is a perfect number. The definition of a perfect number is given only after a perfect number is entered and checked. (Perfect numbers equal the sum of their prime factors.)

Pythagorean Triplets

This program displays a list of integer numbers in groups of three numbers. Although no explanation is displayed, a student of geometry can figure out that the numbers of each group are the lengths of the sides of a right triangle.

Number Converter

Number converter starts with a very brief explanation of numbers and number bases. The student is asked to enter a number, its base, and a target base. The program then displays the number in the target base.

Factorial

Factorial calculates and displays the factorial of numbers beginning with 1 and continues until the program is stopped by the student. No definition of factorials is provided.

Change Maker

The last demonstration program calculates and displays all the ways to get one dollar from the coins 1 cent through 1/2 dollar. The student is challenged to

change the program to display the same for different amounts of money, etc.

Games

The games category contains: *Towers of Hanoi*, *Mugwumps*, *Mugwumps 2*, *Reverse*, *Taxman*, *Nichomachus*, *3D Tic-Tac-Toe*, and *Number Guesser* (version 3).

Towers of Hanoi

This game starts with six disks on one of three towers. The disks are stacked so that the largest disk is at the bottom and the smallest is at the top. The object is to move the stack so that all the disks are on either one of the other two towers. The disks can only be moved one at a time and a larger disk can never be placed on top of a smaller disk. The challenge is to complete the game in the fewest number of moves. Unfortunately, the program doesn't display the minimum number of moves required to accomplish the task.

Mugwumps and Mugwumps 2

The next two games are called *Mugwumps*. Both games have creatures called *Mugwumps* that are hiding in a 10 by 10 by 10 cube. Your task is to capture them by entering their coordinates in less than the maximum number of guesses. The player moves by entering x,y,z coordinates relative to the center of the cube which is 0,0,0.

In the first version there are four *Mugwumps* and you have 12 moves to capture them all. After you enter your x,y,z coordinate the program displays the distance you are from each *Mugwump*. If you happen to land on one, the program tells you that you have captured one. There are 1,000 possible locations, and depending on where you are, there are up to 8 locations where the *Mugwump* can be that give the same distance to you. However, by using the equation for the distance between any two points in space and a little algebra all the *Mugwumps* can be captured in eight moves. Once you figure out the equations the challenge of the game is over.

Mugwumps 2 is even more difficult even though there are only two *Mugwumps* and you have 20 guesses to find them. First, instead of your distance you are given a scalar which is inversely proportional to the sum of the distances each are from you. Second, the *Mugwumps* move at random intervals. And third, if the *Mugwumps* find each other they multiply and destroy you. This one is so difficult that you would be more likely to win the Lotto grand prize than capture both *Mugwumps*.

Reverse

The object of *Reverse* is to order the digits 0 through 9 in ascending order. This is accomplished by

repeatedly exchanging the first digit of the string with any of the other digits. The challenge is to accomplish the task in the fewest number of moves.

Taxman

Taxman is a game that requires careful moves and an understanding of prime factors to successfully beat the computer. The player enters any integer number greater than 3. The computer creates a list of numbers starting at 1 up to and including the entered number. The player then chooses a number from the string. If at least one prime factor of the number is left in the string the number is added to the player's total; otherwise, a new number must be entered. The computer takes all remaining prime factors of the number and adds them to its total. The numbers and prime factors are then removed from the list. The player then picks another number and the process repeats until there are no prime factors left for any of the remaining numbers. The computer adds all the remaining numbers to its total. The numbers for each player are summed and the highest total wins. The program has a bug if the highest initial number is either 4 or 5. In this case it will forget to include the number 3 into its total if the player doesn't pick 3 himself.

Nichomachus

This is a game in which the computer guesses your number from the prime divisors and remainders you give it. The challenge is to specify the prime divisors and remainders so that the answer given is your number.

3D Tic-Tac-Toe

This game can be played with the keyboard or joysticks. You can either play another player or the computer.

Number Guesser Game

The last game is *Number Guesser*, which is like the first Number Guesser demonstration program except that the player tries to guess the computer's number before the computer guesses the player's number. Once again, the player can cheat the computer by falsely answering the questions.

Hardware Compatibility

I tested these programs on every 8-bit Atari I have access to: an Atari 800, 800XL, 1200XL, 65XE, 130XE, and did not have any trouble running the programs with Atari Basic. When I tried *Turbo Basic* on the 800XL, I could not correctly print the output from the Prime Factorization program, otherwise, everything worked normally, albeit considerably faster.

The program disk comes in Atari DOS 2.5 dual density format so you must initially have a disk drive capable of reading it (e.g. 1050). The disk is not copy protected and the user is encouraged to copy or modify the programs for his own use.

Road Testing

Since *Mathematics* is an educational disk, I asked my eighth grade son, Brian, to try the programs. I let him try to figure out what to do in each of the programs before offering my assistance. It was readily apparent that many of the programs did not contain enough descriptive information for him to understand and learn the new concepts he encountered. He also found several of the programs difficult to use due to a lack of explanation on how to run the program. Because of this, he quickly became bored with most of the programs. The programs he enjoyed the most covered concepts he already understood. His favorites were the *Math Quiz* programs, *Towers of Hanoi*, and the *Number Guesser* game.

Observations and Conclusions

A thorough descriptive information screen that explains the concept to the student would have greatly enhanced the value of these programs. Several programs suggest the student study the program to modify it or to see how it works. This is a difficult task because there are almost no comments in the program listings. Although most of the programs would continue to execute if the student entered improper data, many of the programs did not require valid input data. Finally, some of the program messages in response to incorrect answers seemed to be inappropriately negative.

For self-taught home use, I believe a complete explanation of the concepts with examples is a necessity. There also needs to be a focus and direction from which basic concepts build to more advanced concepts. The weaknesses outlined above and a range of concepts varying from seventh grade math to trigonometry suggest *Mathematics* is not for someone who is looking for a home tutorial in mathematics. However, a parent who is proficient in mathematics and has the time to work with his/her junior high student would find this disk of programs to be a good starting point for reinforcing concepts already learned and presenting new concepts. Mathematics teachers would also find this disk useful for the same reasons.

Is *Mathematics* a bargain? Probably not. Is *Mathematics* worth the asking price? I think so.

[*Mathematics* is available from Bresnik Software, 555 Ware Street, Mansfield, MA 02048. \$5.95 + \$2 s/h.]



BobTerm Communications Software

The Best Available to Atari 8-bit Users

by Charles A. Cole

First, a Little History

In the early days of Atari 8-bit computing, when a 1200 baud Avatex modem was considered the highest state of the art, and most users had to settle for the lowly Atari 1030 modem running at 300 baud, the true workhorses of Atari on-line communications were Keith Ledbetter's *835 Express* and *1030 Express* programs. These two programs are still in widespread use among Atari 8-bit owners, and have certainly served us well.

Then, in 1987, the floodgates began to open up. First, Jim Dillow of Sarasota, Florida, released his *DeTerm* communications software as Shareware. *DeTerm* took on-line communications from the Model-T days into the modern world, supporting Hayes, Hayes compatible, XM301, 1030, SX212, and MPP modems at speeds up to 2400 baud, depending upon your hardware's capabilities, and supporting several upload/download protocols. Mr. Dillow and other programmers began releasing add-on modules that improved upon the original concept. *DeTerm* today is still a very powerful and widely used program for on-line communications.

The year 1989 brought us *BobTerm 1.0*, created by Bob Puff of Rochester, New York, our Atari SYSOP on CompuServe (CIS). Release 1.21 of *BobTerm*, improving on his original efforts, appeared as Shareware in April 1990. As word began to spread throughout the Atari 8-bit community of *BobTerm's* capabilities, many people switched to it as their regular communications software.

When it was released, *DeTerm* received considerable press coverage because we still had several Atari 8-bit publications going for us, including *Analog*, *Antic*, *CN*, and even *Computer Shopper*. By the time *BobTerm* was released, *Analog* and *Antic* were struggling for survival, and *Computer Shopper's* 8-bit coverage had practically ceased. *BobTerm* did not receive very much publicity, and there may still be Atari 8-bit users who have not gotten the word about how good this program really is. *BobTerm* pushes an Atari 8-bit computer's capabilities to its limits.

Where Can You Get BobTerm?

For those interested in acquiring *BobTerm*, it is available in CIS's Communications Library in the 8-bit Atari SIG as BOBTRM.ARC. It is file #5002 in the 8-bit Roundtable Library on GENie. Don't forget to send both Jim Dillow and Bob Puff your shareware

contribution if you are using their programs. 'Nuff said. So now, on to a review *BobTerm* itself.

Hardware and DOS Requirements

BobTerm supports just about any modem that will connect to the Atari 8-bit directly or through a serial interface, such as the 850, P:R: Connection, MIO Board or Black Box. It includes handlers for most brands, and will work with any Atari 8-bit computer with at least 48K memory. It is fully compatible with MyDOS, SpartaDOS, SpartaDOS X, TopDOS, and Atari DOS 2.0/2.5.

File Transfer Protocols Supported

You have a wide variety of upload/download protocols to choose from with *BobTerm*, including XModem, XModem-CRC, CIS Fast XModem, 1K-XModem (YModem), YModem Batch, and FModem Batch.

In order to take full advantage of the CIS Fast XModem protocol, you will have to use a DOS that has a command line interface, such as SpartaDOS, because this does not show up in the CIS menu as one of your choices for downloading. First, tell the CIS computers that you want to download using XModem-1K, which is one of their menu choices. Then enter the command, DOW PRO:X1K, hit SELECT when CIS tells you it's ready to send, and you will be amazed at the speed increase over standard XModem! This makes XModem even faster than YModem. [Editor's Note: For more information on this *BobTerm* feature, download the file called BTX1K.TXT from the CIS 8-bit library.--RR]

For Delphi and GENie, the best protocol to use is XModem-1K or YModem Batch. FModem, which sends in 4K blocks, is not supported by any of the online systems yet. Some 8-bit Atari boards running on *BBS Professional* support it. It's the fastest of all when you can use it.

BobTerm supports ASCII, ATASCII, VT-52E and VT-520 translations. ASCII is the universal text standard for most telecommunications networks and non-Atari BBSs. The ATARI (ATASCII) setting will normally work only on BBSs operating with Atari 8-bit systems. The VT modes are for communicating with Digital VAX systems. The VT-52 terminal mode is compatible with CIS's VIDTEX cursor positioning. The VT-52 setting also gives you a more reliable, error-free connection to CIS.

The baud rate can be set from 300 to 19.2K. Rates above 9600 are primarily for null-modem connections. As modems improve, *BobTerm* should never become obsolete like some of its predecessors.

Using the Program

From the dialing menu, entered by pressing the [E] key, you can add, change, print, delete, or dial numbers. Each telephone number's specific parameters, such as long distance access codes, pauses, passwords, translation, baud rate, user number, logon ID, etc. can be saved to disk. Each time you select that number, *BobTerm* will then automatically configure itself to those settings. I have, for example, programmed the local CIS access number to connect in VIDTEX mode, and I can send my password and user ID number, as well as the DOW PRO:X1K command with a simple, one-key macro call. Each telephone number can have four macros containing logon IDs, passwords, etc.

Pressing [F] from the main menu (Originate), allows you to connect to a modem even if you have originated the call on your voice line. This is very handy for transferring files to someone who is not operating a BBS.

The inverse of this, pressing [G] (Send Carrier), allows your modem to automatically answer an incoming call, even if you are not running a BBS.

Pressing [H] from the main menu hangs up the phone for those connections that do not automatically terminate, such as CIS.

A very handy feature of *BobTerm* is its capture buffer. If you know ahead of time that you want to save an incoming message, you can type [C] to turn the capture buffer on. *BobTerm* will ask you for a destination filename, and then begin capturing everything coming in. Pressing [OPTION] then toggles the capture buffer on and off. If you don't realize ahead of time that you want to capture something, no problem! Simply pressing [OPTION] will start the capture. When the buffer fills, *BobTerm* will prompt you for a destination filename and save the buffer contents. If you terminate your connection without saving the capture, pressing [C] from the main menu will prompt you for a filename and then perform the save. This allows you to selectively capture only those specific messages from a BBS or on-line service that you are interested in saving.

The actual capacity of your capture buffer, used also for uploads and downloads, will depend on your hardware. I use a modified 130XE with a 320K RAM and Computer Software Services' Ultra Speed Plus operating system (designed by Bob Puff!), which gives me a capture buffer of 16,384 bytes. A stock 130XE should give you something around 12K.

Pressing [Q] at the main menu allows you to exit to DOS without losing your modem connection. You

can perform various DOS functions, and then resume your connection by reloading *BobTerm*. This is very handy if you want to perform some function such as ARCing or UNARCing a file while you are connected to a BBS, but don't want to log off and then re-dial. A long distance connection, especially, could cost you more if you have to log off and re-dial.

Pressing [R] from the main menu activates the Receive File command used to begin downloads. When you press this key for your first download, you will be prompted to select the protocol to use, and the drive number and filename for the save. On subsequent downloads during that same session, simply pressing [RETURN] at the protocol prompt will automatically select your previous choice. You can change protocols from file to file if you want to check out a system to find the best one to use. The drive number (and path, if applicable) that you select on your first download will become the default for all subsequent downloads, but can be changed at any time.

[S] at the main menu is used to Send (upload) a file. You are prompted to select an upload protocol, and the drive number and name of the file to upload.

Pressing [J] takes you to the system configuration area, where you can change screen colors, edit macros, and set other defaults. This allows you to customize *BobTerm* to your particular desires and hardware.

[K] exits to DOS, allowing you to access such functions as changing the default directory and path or creating subdirectories (for DOSs that support this function), viewing text files, copying, deleting, renaming, locking or unlocking files, and formatting a disk. You will lose your modem connection when you use this command.

Pressing numbers between [1] and [9] allow you to view disk directories while online. You will be prompted for "PATH NAME or RETURN." Simply pressing [RETURN] will display the default directory of the selected drive. You can only specify a directory path if your DOS supports this feature. If the directory is too long to fit on one screen, *BobTerm* prompts you to press [RETURN] to see the next page, or [ESCAPE] to exit.

Conclusion

BobTerm is a very comprehensive program. I have barely scratched the surface on its features. Complete instructions (24 pages) are included in the *BobTerm* ARChive files on CIS and GENie. They provide a wealth of information for getting the most out of your online time. This program is the best one available to Atari 8-bit users, and well worth looking into if you don't already use it. Mr. Puff has performed a great service for Atari 8-bit owners with this program.

Stalk the Market

Hunting for Goodies on Wall Street

Review by John Godbey

When to Buy, When to Sell

Stalk the Market bills itself as "Stock charting and analysis software for the Atari ST computers." The program is designed to automatically track the performance of individual stocks, or of portfolios of stocks, with only a minimum of user work required. It has a number of features to help analyze the stocks' performance, as an aid in determining the proper time to buy and sell. The data can be displayed graphically, and several different types of reports can be generated and printed. It is in all respects a well thought out and solidly programmed effort.

Works Best with Hard Disk

The program uses the standard GEM interface, with drop down menus, dialog boxes, and so on. Almost all menus have keyboard equivalents. The program comes on a single floppy, which is not copy protected. Although it can be run from the floppy, if you plan on gathering much data a hard disk is almost a necessity. Data about stocks can be entered into the program manually, but with a modem and a subscription to one of several on-line services, this tedious process can be eliminated.

The program comes with a well written, spiral bound, 171 page manual. The manual contains a short introductory tutorial, a longer section on suggested uses of the program, and a much longer, detailed reference section which explains all of the program's features.

Use of the program is, for the most part, straight forward. A stock, or a portfolio of stocks (or even several portfolios of stocks), is entered into the program. The appropriate log-on information for one or more of the on-line services that carry stock information is also entered. You then enter the date or dates for which you want information. *Stalk the Market* dials the service, logs on, downloads the information (high, low, closing, volume), logs off, and updates your files—all automatically. It takes less than one minute for *Stalk the Market* to log on to Compuserve, and download a week's worth of information on a portfolio of eleven stocks.

Once the data is safely saved to disk, you can play around with it at your leisure using *Stalk the Market's* graphing and analysis functions.

General Set Up

The general set-up of the program is easy. There is a "Preferences" drop down menu with the available choices. Such things as how the desk top should look when the program is first run, the path where the data is stored, etc., can all be set from the menu. A second group of general set-up options concerns the automatic dial up feature of *Stalk the Market*. The program writes a set of drivers for each dial up service you use. (The program supports Compuserve, Genie, Dow Jones, and NewsSource.) So you need to enter the appropriate log on information—telephone number, ID, password, etc—for the services you use. Enter this information once, and forget about it.

Finally, you have to enter the names and standard ticker abbreviation for the stocks you are interested in. This is done via a GEM dialog box. Again, do it once and forget about it.

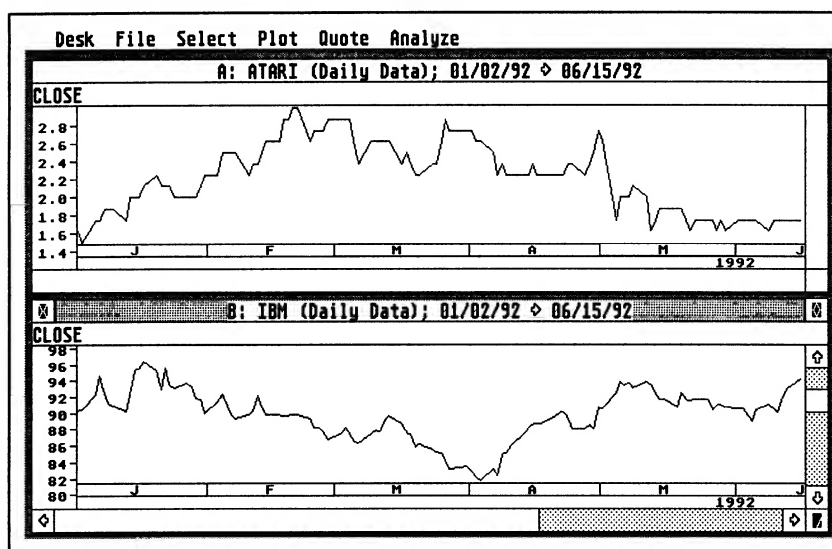
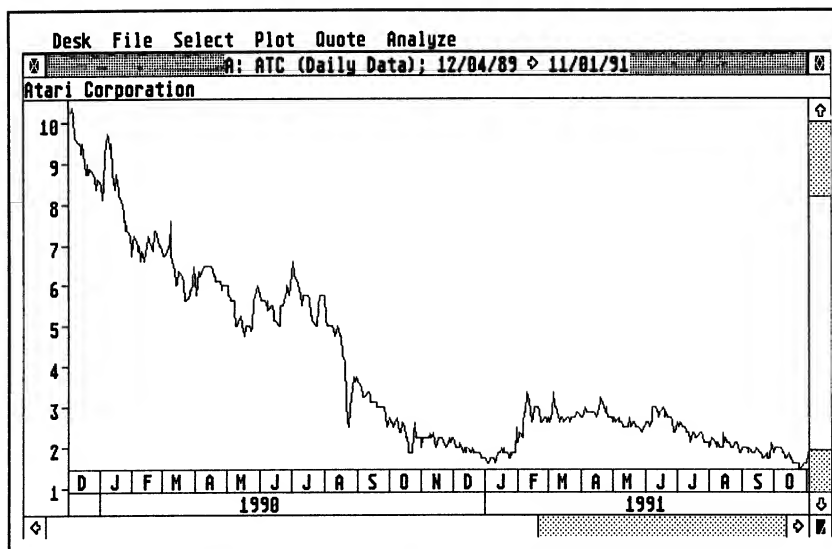
Updating Stock Information

Once the set up has been completed, updating information on stocks is simple. From the dropdown "File" menu, select "Download." To get data on a stock, or a portfolio, simply enter the dates for which you want the data. The program takes care of the rest, all automatically.

Once you have started keeping stock data in *Stalk the Market*, the job of updating your files is even easier—you don't even have to enter the dates. Just pick "New Dates Only" from the menu, and *Stalk the Market* will read your existing files, determine what dates need to be downloaded to bring them up to date, and then do the download, all automatically. This is one of many nice touches that make the program a pleasure to use.

Entering Transactions

Finally, all of the relevant transactions for the stocks in a portfolio must be entered into the data base—the number of shares bought or sold; and the dividends, capital gains, and other distributions. To the degree possible, *Stalk the Market* will help you with this. For example, you can enter a commission schedule to be used for each buy or sell transaction. The program will then automatically adjust the value of your portfolio to reflect the appropriate commissions. Different stocks can have different commission schedules associated with them.



If you are only interested in tracking the value of a portfolio of stocks, then it is only necessary to enter the shares bought and sold. If, however, you want to make full use of the report and analysis sections of *Stalk the Market*, then it is necessary to enter all stock distributions. All of this information is necessary to truly track gains and losses—the kind of information that the IRS requires every April.

Display of Portfolio Information

Stalk the Market has two basic methods of displaying information about a stock or a portfolio of stocks: graphically, or via a ledger.

In order to display a stock's historical information, the file of information is accessed via a drop down menu. When loaded, the information is displayed graphically, almost instantly. The program will display daily, weekly, or monthly information. It will display the stock's highs, lows, closings, and volume informa-

tion, either one kind of data at a time, or several combined on a single graph. Intuitive drop down menus enable you to easily resize the graphs, zoom in, etc. Up to four graphs can be displayed at once.

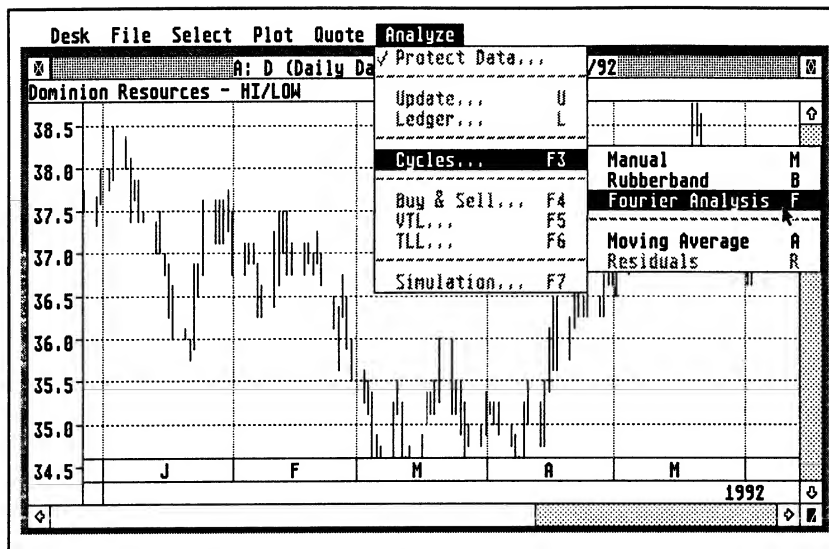
The information on individual stocks, or on entire portfolios, can also be displayed as a ledger. The ledgers list all transactions for each stock, and the amount each has gained or lost since it was purchased. The ledgers make it easy to see how any stock, or group of stocks, has been performing. The data in the ledgers can be easily manipulated for easy "what if" determinations using hypothetical buys and sales.

The program allows for a moderate degree of output. Any of the graphs can be printed using the alternate-help keys. As an alternative, the screen can be saved to disk in a standard Degas format, to allow for more flexible manipulation and printing from other programs.

The data in the ledgers can be printed out in various reports showing total gain/loss, gain or loss for this year, present value of a portfolio, etc. If you have entered in all stock distributions, then it will print out in a nice format all the information that is needed to fill out Schedule D of the federal income taxes. Finally, the data can be printed to file in ASCII format, and then read into programs such as *LDW Power* for further analysis and display.

Analyzing Historical Trends

There are at least two schools of thought as to how you tell if a stock should be bought or sold. The first holds that you look at the company itself—e.g., its earnings, debt, diversification, product line, and so on. The second holds that you examine trends in the stock market. Since I am a member of the first school, I was only moderately interested in *Stalk the Market's* ability to analyze various trends in a stock's performance. Its abilities in this area are, however, extensive. The program will calculate and graph moving averages, perform Fourier analysis on the data, keep track of downward and upward "valid trend lines," and help with several other more or less esoteric analyses. These features all worked as they were supposed to work, and if you are a believer in cyclic analysis of the stock market you will love them.



Conclusion

In several months of using the program I have yet to have it crash. It is both well thought out, and well executed. Its manual is a bit disorganized, in my opinion, but this is a minor quibble. Everything you need to use the program is there, and the table of contents

and extensive index enable any topic to be found quickly. Finally, the program's author is available on the on-line services if you need help. I asked him questions about his program on two occasions, and both times I received an answer within 24 hours.

Stalk the Market is a program that will meet the needs of a relatively small part of the Atari market. If you are one of the users who wants to be able to track stocks, then I highly recommend this program. It's only competition is a shareware program called *STock->Smart*—and frankly, there is no competition. This is the program to get.

[*Stalk the Market*, Quidnunc Software, Suite 175, P. O. Box 819081, Dallas, Texas 75381-9081. Phone 214-243-0663.

Note: a demo version of *Stalk the Market* is available in the CN library on disk #695D.]

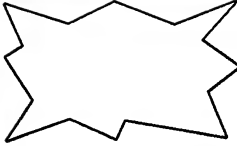
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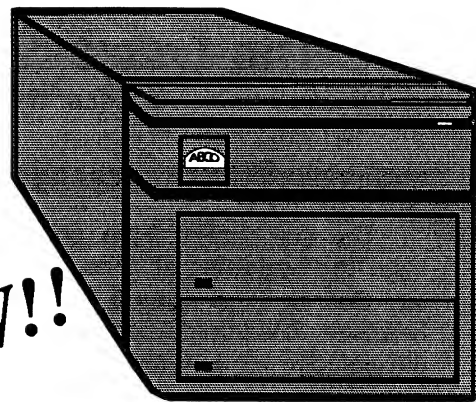
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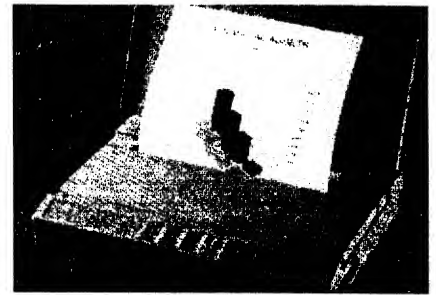
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StarJet 48 Printer

The Latest Starz in the North

Review by Bob Ledbetter



The dot matrix 9-pin printer has been around since the beginning of time. My time with a computer, that is. First a used Legend 808, then a new Seikosha SP1200-AI. Both worked as promised and did not give me any trouble whatsoever. I fed them a new ribbon once in awhile, just to keep them in the black, got rid of the accumulated paper dust on a regular basis, and they just sat there doing their thing.

Dreams of a Printer

In the back of my mind, and sometimes in the front, I kept thoughts of what kind of printer I would upgrade to when that time rolled around. The more DTP I did, the more obvious it became that a printer upgrade was in order. I think during the past year and a half I have read everything that has been printed about printers. That's an exaggeration of course, but the point is, I did not buy on an un-educated hunch. Lasers were definitely a consideration, but the care and feeding (toners, drums, etc.), not to mention the initial cost, were major factors. The ink jets were also investigated, as were the bubble jets. Well, I took the plunge on the 18th of April, and a StarJet SJ-48 by Star Micronics is occupying space on my desk. A lot less space than its predecessors, however, as the SJ-48 is one of the new portable jobs.

It comes with a power converter as the main power cord, and since it is portable, an optional battery pack is available. A cut sheet feeder (CSF) is also an option, but in my humble opinion it should be included. Until I received the CSF, I used the "Universal Paper Feeder by ArmStrong." It was good and reliable, but not 100 percent accurate when it came to placing the sheets in the slot. The cut sheet feeder was a welcome arrival.

Return of the Irish Phantom

However, Murphy was still around. Although he had not put in an appearance in quite some time, he was as ready as ever to do his thing. This time his thing was to make printing a multi-page document a rather, shall we say, trying experience. I had used the SJ-48 for several weeks before the CSF arrived, and I had not experienced any problems. I ran *WordPerfect's* PRINTER.TST file through the printer when I first hooked it up, and since the "Star NX-2400 Additional" driver gave me eight different fonts, I decided that would be the default printer driv-

er, and it worked well. Then I attached the cut sheet feeder and began printing a multi-page file.

That's when I was Murphyized! The text on every page was advanced one line with each page change. A quick call to the Star Micronics' Techies in New Jersey let me know I was using the wrong driver. Their suggestion was the same as on page 75 in the manual—XB-2410/XB24-10 when in the Standard Mode, or the Proprietary X24E in the IBM Mode. Well, it was back to the drawing board as *WordPerfect* for the ST does not have either of those drivers. After trying *all* of the Epson Drivers and *all* of the Star Drivers, here's what I've done. My default driver—it's called the "A" driver in *WordPerfect*—is the "Epson LQ-2500." The page breaks occur where they are supposed to with six of eight fonts working. If I want to use either of the other two fonts, I select the "NX-2400 Additional" and make allowances for the page-break problem. With the "NX-2400 Additional" driver, font 4 is a "shadow" font, while font 5 is Outline. I have noticed that font 8 in all drivers is the "draft" or "economy" setting. That makes it easy to "proof" a document. You can set the printer to "economy" on the printer itself, or by going to the very beginning (before all other codes) of the document and choose font 8. When using the "economy" mode the print speed is no different from the "high quality" mode. It simply uses less ink. Handy! I also checked out the SJ-48 with *Word Writer ST*. I loaded the "EPSON.CFG" printer driver, the SAMPLE.DOC, and it printed out as expected.

The Black Sea

Then it was on to *PageStream*. The "EpsonQ" driver did not like "landscape" files, so I tried the "LQ-2550" and it really dumped the ink on the paper. So much ink that it was still "shiny wet" when the paper was ejected after printing. Then I tried the "NECP7" driver. Same thing. So...if I am just "proofing," I set the printer to the "economy" mode. I can't really tell any difference between the "LQ-2500" and the "NECP7." Both take about the same time to print and the quality is comparable.

A Single Drawback

Are there any drawbacks to having the SJ-48 as my only printer? The only one is the fact that it does not take tractor fed paper and the CSF only holds 30

sheets. However, I can use any kind of paper, and any size up to 8.5" x 11," that I want. Envelopes are easily done by removing the CSF and moderately heavy card stock can also be used. This is accomplished by feeding the stock through the back, where it is not bent at all.

The SJ-48 uses an ink cartridge with a 48 nozzle print head, and the manual says it has a life expectancy of 700,000 characters. By the way, the Star ink cartridge appears to be exactly the same cartridge its Brother and Canon cousins use. I've not seen the SC-10 ink cartridge around Fairbanks, and when I've gone through the 700,000 characters I'll get one of the others. Something else is theoretically available, but I have not seen it. An ink cartridge re-filler kit. I've heard it comes with a syringe and a bottle of ink. That would be nice, as the cartridges run about \$25 each.

A Star!

To wrap it up, the SJ-48 is a dandy little number, with very good print quality. Even though the list price is \$500, I've seen it in the "ad book" for around \$275, without the Cut sheet Feeder. Again, power without the price, but from Star this time.

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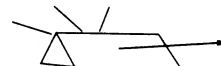
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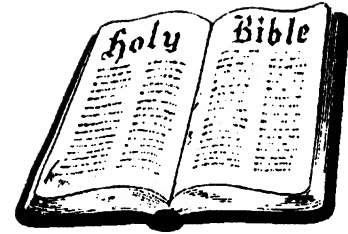
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Concordance 3

Equals or Surpasses Bible Concordances on the Mac or IBM...

by Bruce D. Noonan, M.D.



Two years ago, I read the review of the *Bible Concordance* program written by Dr. Don Clifton. I was amazed to find that he lived in the Puget Sound area, yet we had never met. I thought I already knew most of the serious Atari users in the area. I discovered Don lived only about three miles from my home! I ordered a copy of the program based on the review in *Current Notes*, and was very favorably impressed with its capabilities. It came with both the King James Version and NIV, allowing one to load either text for study.

I introduced myself to Don over the phone and invited him to demonstrate the program at our local users' group meeting. The demo was a huge success among those who were interested in Bible study. Granted, many people could care less about Bible study, just as some never use MIDI or do desktop publishing. But for a sheer demonstration of computing power, *Concordance 3* (C3) equals or surpasses Bible concordances on the Mac or IBM, and at only a fraction of their cost.

After using the first incarnation of *Concordance*, I had some thoughts

about improvements I would like to see, and in speaking with Don, he had been thinking along similar lines. The result of this has been a radically improved Bible concordance, which is an extremely powerful, yet user friendly product. I have rarely seen such flawless programming. Don has spent two years fixing bugs and refining *Concordance 3*, which appears to resemble the previous program, but as you will see, is much more sophisticated.

What Is a Concordance?

A concordance is a form of index to a book, or in the case of the Bible, an index to 66 different books (see figure 1). Typically, each and every word used in the text is listed along with portions of the text around it (ie., its context). Usually, a concordance is a separate book from the one being indexed. C3, however, requires the complete Bible text to be loaded. It then has the ability to locate every instance of a particular word in the text.

For the serious Bible student, having multiple translations available lets you more fully understand the meaning behind the words, which in the case of the New Testament, was

originally written in Greek. Having the original Greek text alongside an English translation, with a reference dictionary only a mouse click away, brings a whole new dimension to serious Bible study. And that is precisely what C3 does. These features make *Concordance 3* rank among the very best of study tools for Bible students.

Search capability was one of the original program's outstanding features. I could type in a fragment of a verse that was in the back of my mind, or simply a couple of key words, and every occurrence of those words would be listed by verse in a matter of seconds.

A concordance usually limits listings to only one word, but with the computer, multiple words can be selected for search, and all verses that contain the words in the search criteria would be found by the computer. Thus, a computer-based concordance is far more powerful than a bound volume. For example, one might wish to search for the words *spirit* and *God* at the same time. The computer would do a multiple search and list all verses that contained both words at the same time, and exclude those verses that only contained either *spirit* or *God* alone. (See figure 2.)

Concordance 3 and its predecessor also allow you to mark sections of text and flip back and forth between them with only a mouse click. You can print out verses, or lists of verses following a search, and save the portions of text or verse list to disk. Its use of GEM windows, menus and dialog boxes is a very clean, nearly bug-free implementation, evidencing the obvious attention to detail that went into its development.

C3 now allows *multiple* text versions to reside in memory simultaneously, any two of which can appear

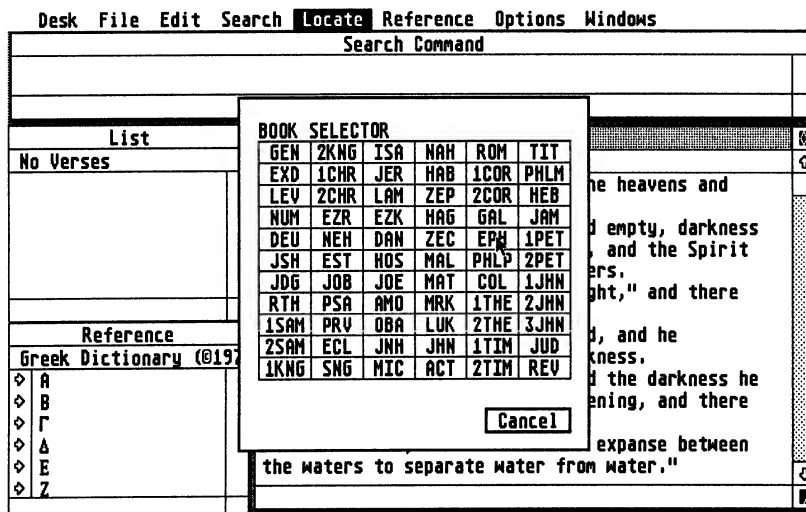


Figure 1. Select any of the 66 books of the Bible.

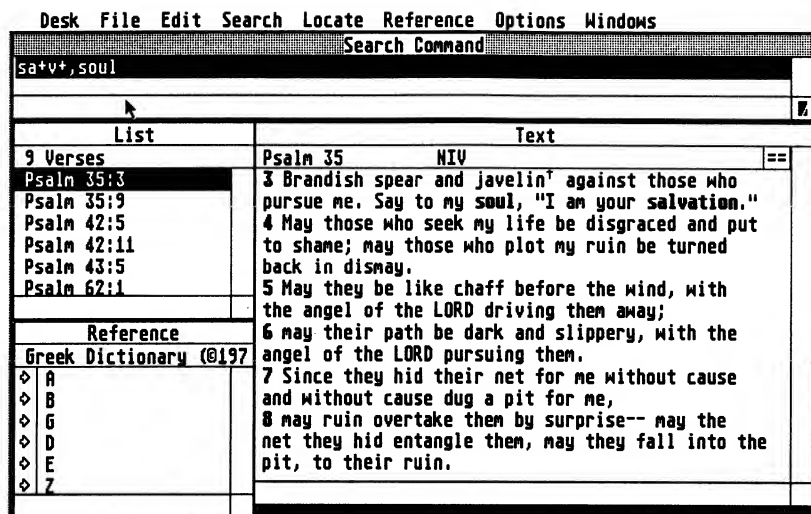


Figure 2. Concordance has powerful search capabilities.

side-by-side in the text window (see figure 3). This includes the Greek New Testament, which can either appear as transliterated (English alphabet equivalent) or in the Greek alphabet if you have GDOS or G+Plus installed. Transliteration can be turned on or off, allowing you to ease into Greek pronunciation as you learn to read the Greek text. The Greek word "aggelos" (angel, messenger) transliterates to "angelos," for example.

Furthermore, the program runs in any 80-column mode on the ST and TT, in color or monochrome. The installation of the program on a hard disk is almost a necessity for serious Bible study, as the number of disks to juggle would make comparisons between one section or version with another extremely difficult. The Bible texts are in compacted form, so they take up only a fraction of the actual size of the expanded text. My installation consumes 6.7 Megs on my hard disk, and consists of KJV, NIV, Greek NT, and a Greek Reference Dictionary. The latter is extremely useful for studying the accuracy of English translations from the original Greek.

The pastor of Don's church is an accomplished Greek scholar. He painstakingly examined each word used in the Greek NT and morphologically tagged them according to their individual derivations. This allows one to look up root words (lemmas) in the dictionary corresponding to a form of the word found in the text. It also

enables various types of searches for verses containing similarly derived Greek words (see below). I discovered another feature by accident. You can also select an English word, and the equivalent Greek word will be found in the dictionary! C3 also makes provision for future inclusion of references such as Bible commentaries or Bible dictionaries.

Loading Text

You can either load multiple translations into memory simultaneously, or one at a time from the main menu. Any printer fonts or GDOS fonts need to be specified ahead of time in your ASSIGN.SYS file. The installation program will create an appropriate file for you if you already have GDOS. GDOS is *not* supplied with *Concordance 3*, nor is an appropriate GDOS printer driver. The GDOS fonts *are* supplied, however. When printing, you can select either standard mode (normal text) or graphics output (GDOS fonts). As of this writing, FMS GDOS has not yet been released, so I cannot comment on its use.

There are four windows used with C3: (1) a text window, (2) a search window, (3) a list window, and (4) a reference window. The text window can be split into two sections if more than one version of text is loaded, the portion on the left side being the "active" text. "Active" means that you can select words or sections

of the text for copying to the clipboard, saving or printing, copying to the search window, or to look up in the reference. Swapping the two columns of text from "active" to "inactive" is achieved by clicking on the "↔" symbol in the text window information line. Clicking on the "==" symbol switches between a single column (one version) of text and two columns (two versions) of text in the text window. Thus, you can select NIV, KJV, and Greek NT for viewing, any two of which can be present at one time side by side.

Small menus drop down from the text window info line allowing one to swap versions of text to and from the text window. The windows can be changed in size, and laid out according to user preference. The layout can be saved to a configuration file as well.

The list window contains a list of verses found after a search. Clicking on any verse in the window immediately causes that verse to appear in the text window with the search word(s) appearing in bold text (see figure 2). The list window also shows the number of matches found and the number of verses found. (Sometimes individual verses may contain more than one match.)

Clicking on a word in the text window while holding down the [Control] key highlights the word and brings up the reference dialog box. Selecting the Greek dictionary will make the selected word appear in the reference window along with its meaning. You can also select "Show Parsing," which will show a noun or pronoun's inflectional form, or case (dative, accusative, nominative, vocative, and genitive); gender (masculine, feminine, or neuter); and number (singular, dual, or plural). Verbs will show tense (past, present, future, imperfect, pluperfect, perfect); voice (active or passive); mood (subjunctive, optative, imperative, indicative, infinitive); person (first, second, third); and number. Wow! Where was a program like this when I was in high school studying English grammar and diagramming sentences?

Searching

As already stated, the *real* power of a computer based concordance over printed text is its search capabilities. C3 allows the use of wild-cards in searching. For example, the wild-card character "+" can equal any combination of characters to search for. The wild-card word "sa+v+" could find "save," "saved," "saving," "salvation," "savory," etc. The Greek NT Dictionary stores words in their "lemma" form. The "@" symbol in front of a lemma form of a Greek word will find all occurrences of that word and all words derived from that word in the text. Greek words can also be searched by grammatical form by selecting the part of speech, and all pertinent parsing information. For example, you could find all masculine, singular, accusative nouns. Lemma and grammatical searches are only available on the Greek NT text.

Searches allow you to specify a maximum range of separation for two words, preserving their order. Commas mean "and," so "truth,glory" finds all verses with the words truth and glory in either order. If you are searching for several related words such as "ate," "dined," or "supped," use the "/" as the "or" operator, and all verses with one or more of those words will be located. Combinations of these operators can do some pretty creative searches.

Although C3 allows you to print out sections of text, I thought it would be nice to be able to extract large portions of the Bible text, so I wrote a program called "Expander" which will do this and put the text into *ST Writer Elite* (my favorite word processor!) format. I believe SpiritWare is including this on the program disk.

C3 is an outstanding program. For the novice or casual Bible student, it simplifies scripture study. Yet, C3 is sophisticated enough for use by even the most knowledgeable Bible scholar. I would highly recommend it to pastors and Bible teachers.

C3 requires 2 Mb of RAM. Those with memory constraints should buy *Ver. 2.2 of Concordance*. This version only allows one text ver-

| Desk File Edit Search Locate Reference Options Windows | | | | | | | | | |
|--|--------------------------------------|--|--|--|------|---|--------------------------|-----|----|
| Search Command | | | | | | | | | |
| List | | | | | Text | | | | |
| No Verses | Ephesians 1 | | | | GkNT | ↔ | Ephesians 1 | NIV | == |
| | 1 Παῦλος ἀπόστολος | | | | | | 1 Paul, an apostle of | | |
| | Χριστοῦ Ἰησοῦ διὰ | | | | | | Christ Jesus by the will | | |
| | θελήματος θεοῦ τοῖς | | | | | | of God, | | |
| | ἁγίοις τοῖς οὖσις ἐν | | | | | | To the saints in | | |
| | Ἐφέσω καὶ πιστοῖς ἐν | | | | | | Ephesus, the faithful | | |
| | Χριστῷ Ἰησοῦ | | | | | | in Christ Jesus: | | |
| | 2 χάρις ὑμῖν καὶ εἰρήνη | | | | | | 2 Grace and peace to | | |
| | ἀπὸ θεοῦ πατρὸς ἡμῶν καὶ | | | | | | you from God our Father | | |
| | κυρίου Ἰησοῦ Χριστοῦ | | | | | | and the Lord Jesus | | |
| | 3 Εὐλογητὸς ὁ θεὸς καὶ | | | | | | 3 Praise be to the God | | |
| | πατὴρ τοῦ κυρίου ἡμῶν | | | | | | and Father of our Lord | | |
| | Ἰησοῦ Χριστοῦ ὁ | | | | | | Jesus Christ, who has | | |
| | εὐλογήσας ἡμᾶς ἐν πάσῃ | | | | | | blessed us in the | | |
| | ἐλέει αἰνεῖται ἡμῶν | | | | | | mercifully speaks with | | |
| | παιδὶς ἡμῶν ὁ ἀγαπῶν ἡμᾶς ἑαυτὸν ὑπο | | | | | | himself for us, that he | | |
| | ἑαυτὸν ὑπο | | | | | | himself for us, that he | | |

Figure 3. Both Greek and English texts can be compared side-by-side.

sion in memory at a time, and cannot run the Greek text version or use the references. Still, all the search capabilities are present. At these prices, either program is a real bargain! Don has written the program as a ministry, and all proceeds go for the work of his church.

[*Concordance 3.0*, \$20; *Concordance 2.2*, \$10; New International Ver-

sion Bible, \$30; King James Version Bible, \$20; Greek New Testament + Dictionary, \$30. SpiritWare, 15th Avenue Bible Church, 15211 15th Ave. NE, Seattle, WA 98155. Phone: (206) 364-1981 (Church Office.)] Note: *Concordance V2.202* is available in CN library (#700) as is the King James Version of the NT (#701D).

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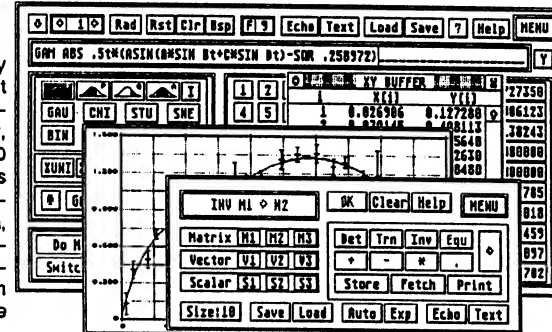
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Another World

Award Winning Arcade Adventure

Review by Alfred C. Biovetti & Amanda Giovetti

Another World was released for the ST in Europe by Delphine Software, the developer, and US Gold, the European Distributor. This game is a mystery in development as well as style and content. *Another World* is the second game by Eric Chahi for Delphine, and the fourth game by Delphine. It is rumored that Eric Chahi was too expensive after the award-winning *Future Wars* (the first Delphine Game), and it has taken the last two comic art games for the estranged developer to get back together with Delphine for another game. *Another World* is a side-scrolling arcade adventure like Broderbund's *Prince of Persia*, a graphic adventure game.

Arcade Adventure Action

Unlike its Delphine predecessors, *Another World* is not a graphic adventure. There are elements of graphic adventure when a beautifully animated big hairy alien (looks like Chewbacca) puts his hand on his savior's shoulder in the second set of scenes in the game. There is no time to sight-see in this game, since it is arcade, arcade, and more arcade. The arcade adventure game comes as a break with the tradition of earlier Delphine games. Delphine was one European company that produced at least one excellent graphic adventure that sold well in the United States and won awards. *Future Wars* graphics, that were produced by Eric Chahi, were so good that many people put up with the insane copy-protection and the awkward interface, just to see one more screen. *Another World* also marks a significant departure for Interplay, who is known for their role-playing and graphic adventure games.

Another World is NOT a graphic adventure game, it is an "action adventure" or an "arcade adventure."

The Plot Moistens

The protagonist, "young scientist Lester Chaykin," goes in late one stormy night to check on his particle accelerator. After the security check, a particularly unstable particle from experiment 23 mixes it up with a lightning bolt that has managed to bypass the security check and enter the experiment. The result is that the desk and scientist find themselves underwater in *Another World*. From the point of impact in this new world, Lester must keep on the move, running, kicking, swinging, shooting, jumping, and rolling until he works his way to escape

from his captors in the finale. The actions needed to complete the game require annoying and troublesome repetition until you get them right. The game has four letter codes which allow you to start at the beginning of one of twelve (thirteen in the US version) series of screens. Lightning quick reflexes and an understanding of your character's capacities is required for success.

Run, Fire, Kick and Run

After the successful completion of the first installment of screens, the protagonist acquires an energy beam pistol. Adept use of the pistol is needed to complete the remainder of the game. This weapon can provide a shield (a tap on the fire button), a short lethal burst (a short pull), or an explosive fireball (hold down and release). The shield can be used in front and back of the character. The burst is used to kill life forms and to dislodge other inanimate fixtures. The explosion will remove doors, walls, and other players' shields. Lose the gun and you lose the game. Become proficient with the gun and you win.

Sights and Sounds

The graphics are composed of fluid animation of filled polygons which provide strikingly beautiful scenes and amazingly life-like graphics. The animation is flowing and smooth and is one of the best aspects of the game. The animation is truly innovative and makes us await the next use of this technique with baited breath. Sounds, effects, and music, on the other hand, are good but unremarkable, with no voice support. The game is now out for the ST, Amiga, and IBM-PC. Copy protection is by symbol-based, color-coded code wheel in the ST version. Color blind people need not apply.

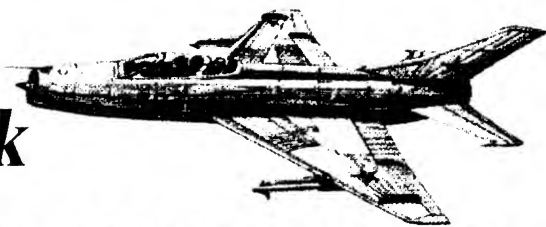
In Conclusion

The game is neither a graphic or role-playing adventure, yet it is a good one for those of you who like action or arcade adventures. The game uses fluid, animated, filled-polygon graphics of the highest quality this author has seen. The graphics, developed by *Future War's* Eric Chahi, are beautiful and worth the look, even for an avid adventure gamer to play an arcade game.

European Distributor: USGold; US Distributor: Interplay. Price: \$59.95

Chuck Yeager's Air Combat Handbook

by Mike Heininger, (c) 1992



What, recommend an air combat simulation handbook for a non-Atari program? Roger—for three reasons:

- As possibly the most fun air combat simulation available for any computer today, *Chuck Yeager's Air Combat* has inspired a 222-page handbook that includes some tactical and game development perspective available nowhere else.
- Although the IBM-compatible *Air Combat* probably never will be adapted for Atari (comparatively small market and all that), most of its World War II, Korea, and Vietnam lessons apply to Atari flight simulations.
- As the first book in a new "Computer Gaming World presents" series, this handbook offers excellent insight into what makes games classic according to *Computer Gaming World*, which after 10 years claims to be the "oldest computer game publication in the world."

Sure, most of the insight deals with specific situations in *Air Combat* and how to maximize survivability. This is fascinating in itself as vignettes of U.S. Air Force challenges in three wars.

Creators, Yeager Interviewed

But authors Russell Sipe, *Computer Gaming World* publisher, and Mike Weksler offer two terrific bonuses in interviews both with the game's Electronic Arts creators—designer Brent Iverson and producer Paul Grace—and Air Force Brigadier General Chuck Yeager, the game's namesake.

For the long-haul record-keepers, the authors also have developed a campaign plan to compensate for the lack of one in the computer simulation. Six campaigns are suggested for P-51, FW-190, F-86, MiG-15, F-4, and MiG-21.

Chuck Yeager's Air Combat is great fun. I've played it on a son-in-law's IBM-compatible 486/33MHz. When you tire of specific scenarios, you can set up all sorts of fantasy matches, e.g., you in one F-4 of the Vietnam era challenging four FW-190s and two Me-262 jets of WWII.

Not all aircraft in *CYAC* are available for you to fly. For example, the bombers—from B-17s in WWII to B-29s in Korea and B-52s in Vietnam—are there

strictly to escort or attack, depending on your brand loyalty.

Combat, Not Flight, Simulator

In this particular compromise between reality and playability, some of the fighters are a real handful to pull out of high-speed dives. In fact, the handbook authors emphasize *CYAC* is not a flight simulator but an air combat simulator—the idea is the most tactical fun for the buck; technical matters, such as exquisite engine ma-

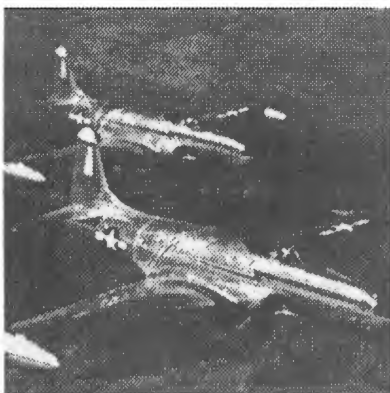
nipulation, are constrained where they would interfere with game enjoyment.

It's ironic that when the earlier *Chuck Yeager's Advanced Flight Trainer* became available for Atari, it flopped because its graphics were so slow—the aircraft essentially were uncontrollable because of the jerky screen refreshment.

But *Air Combat* is silky smooth and gorgeously detailed if still a bit blocky-looking, at least on the powerful 486/33MHz and Super VGA 800x600 setup I saw. So even if it were issued for Atari, it might not work well at all on Atari 8MHz or even 16MHz speed and subVGA graphics.

Nevertheless, airpower enthusiasts buy books, magazines, and videotapes all the time that aren't dedicated to Atari products. So don't let the fact that *Chuck Yeager's Air Combat Handbook* supports an IBM-compatible program deter you from giving it an honored place in your reference collection.

Available in computer stores and bookstores for \$18.95 from Prima Publishing, P.O. Box 1260, Rocklin, CA 95677; (916) 786-0426.



Pictures of combat aircraft, from top of page: MiG-21 Fighter, American F-80s, F-16 Fighting Falcon.



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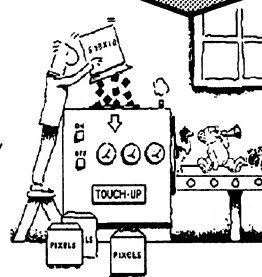
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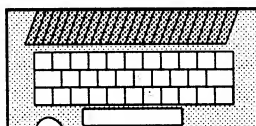
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THE ULTIMATE VIRUS KILLER

Review by Sam Van Wyck

It happens suddenly. In the midst of a late night session with the word processor, spreadsheet or worst of all, in one of those games that sends you back to square one whenever you die. Just as you are about to surmount the final challenge, the sound system bleeps, the screen darkens to a point of light and THE MESSAGE appears: KILROY IS STILL HERE!! Your computer and game go into catatonic withdrawal. You have just become host to an active virus.

There probably isn't a Kilroy virus running around out there but, there are plenty of others to worry about. Anyone is vulnerable, but those with hard drives have by far the most to lose to this form of computer disaster. Smart users already take precautions when introducing new programs into their system. It's not exactly *Safe Sex* but the principles are very, very similar: limit your exposure and take precautions when you must!

Ultimate Virus Killer (UVK) provides a very sophisticated but easily used method of assuring that your programs and files are, and continue to be, virus free. It may be loaded from any drive, but the author suggests booting with the program in drive A. An automatic check of your computer's inner health is followed by a number of menu-selected options leading almost intuitively through the process of checking for viruses on all drives.

If desired, "immunization" against some of the viruses may be added to each disk. This is accomplished by inserting something that looks like a virus, but isn't, at a certain location on the boot sector. Some viruses check to see if they or another of their ilk are already in residence and if so, they do not install themselves. It's interesting how closely this resembles the workings of the human immune system!

This Program Is Easy to Use

When the program is run, it first checks the computer memory and operating system. Any anomalies are highlighted. Users are referred to "the book," which probably means a technical manual for the machine in use. This is not specified in the documentation. Active drives are also shown.

A very simple main menu then appears. Control of the various choices here and in other locations is by (1) mouseclick, (2) function key or (3) arrow key and [Return]; MOST accommodating! My primary interest here is "Search 'n' Destroy," which initiates the anti-virus action.

Subsequent menus determine the drive to be searched, what type of virus to search for and the manner of search: by partition or individual file. Files may also be automatically immunized against infection at this time. Once activated, the process proceeds quite rapidly.

Checkout of a floppy containing a dozen folders with about 100 text files took less than a minute while searching twelve megs of hard drive business files consumed only thirty seconds.

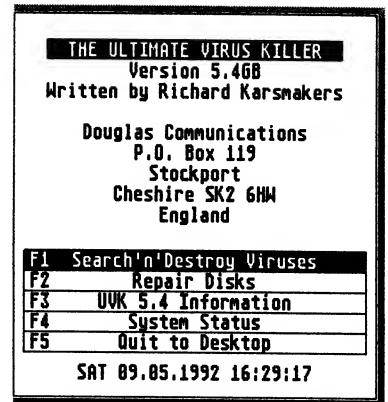
What If a Virus Is Found?

If a virus is found, the program will identify it, if known, and give you the opportunity to destroy it. That is the easy part. However, there surely are, and undoubtedly will be, viruses around that are unknown to the program. What happens if something new and unfamiliar is encountered?

If there were some universal sign that characterized a virus, the next step would be simple: Find it and kill it! However, some disks contain code in the bootsector that may resemble a virus but is, in fact, necessary to the proper functioning of the program. Should this situation be encountered, it is possible that the bootsector will be recognized as one in the UVK library and the anomaly identified as harmless.

For an unidentifiable foreign structure in the bootsector, the user is given a (somewhat difficult) choice. Either the disk may be accepted "as is", with no changes, or else the program may be commanded to continue with the Destroy function or to write a new bootsector. The drawback to this is that, in the case of a harmless disk, any deleted or modified code may prevent the program from loading or running. It becomes somewhat of a judgement call at this point.

This critical decision is aided by the presentation of a Virus Probability Factor that gives the odds on whether the disk actually harbors a virus. According to the author, the reliability factor of this estimate is "quite high."



Repairing the BIOS Parameter Block

This block of data contains vital information about the disk: The number of bytes per sector, the number of FATS and how many sectors each has, the number of sides to the disk and much more. Loss of this data will result in a system crash. Since some viruses deliberately corrupt this block, *UVK* provides an opportunity, when needed, to correct the damage.

The manual text regarding this task contains several warnings, in CAPS and with multiple exclamation points!!! The author wishes the user to realize that messing about with the BIOS data on a disk is fraught (yes - FRAUGHT!) with danger. Only the Indy Joneses of the computer world should venture into this temple! The option exists to send the affected disk to the author along with the price of a *UVK* update on a no cure-no pay basis.

Bootsector Replacement

Another option is to replace the entire bootsector of a damaged disk. This may be accomplished with a known commercial program such as *F-16 Falcon*. Here, the presence of a nonstandard bit of code may have prompted a virus "kill," inadvertently ruining the disk. The version of *UVK* under review contains a library of almost 500 bootsectors which may be reattached as needed. The author promises further additions via frequent update disks and will even attempt to contact software companies in order to obtain a specific repair "part" for his clients.

Commentary and Opinion

Although there have been several virus detection programs available to the Atari user, I am only familiar with George Woodside's *ST Virus Killer*. Convenient and user-friendly, it lacks the ability to check out the hard drive. *UVK* handles all drives, from A to (literally) Z. It also provides the system status check whenever it is booted.

Use of the *UVK* system is quite simple. The manual covers most of the necessary information and almost 40 screens of help-key data are literally at the user's fingertips. Incidentally, these are genuine HELP screens with a wealth of pertinent information about the subject at hand.

The manual is contained on disk and is so extensive that it is accompanied by its own unpacking program. Actually, of the 50+ pages, only the first 14 or so are instructions. The balance are devoted to the bootsector library and listings of the

```
File Edit Search Format Style Print Special
Doc 1 - D:\WORDPERFECT\ARTICLES.CMP\MANUAL_2.TXT

Virus #17
Name: Mad Virus C
Discovery date: January 1989 (Frits Couwenberg)
Symptoms: See virus #2
Remark: Some of the last screen fiddle/sound routines in this
virus have been corrupted by alien code. It will therefore crash
when these routines are executed.

Virus #18
Name: Mutant Antivirus #1 A
Discovery date: January 28th 1989
Symptoms: Copies itself to other disks. (except when they're
executable). Some of the latter half of its code is corrupted by
alien code. However, and may/will result in a system crash.
Remark: Read further for more info about anti-viruses.

Virus #19
Name: Goblin Virus
Discovery date: April 3rd 1989 (Clive Duperley)
Virus can copy to drive(s): A or B (drive used by disk access
all)
Virus attaches itself to: Hdv_bpb and resvector; also non-
documented reset-resistant
Disks can be immunized against it: Yes (1A2.L $27182818)
Immunizable with UVK: Yes
What can happen: It puts the message "The Green Goblins Strike
Again" on the screen; it can also mess up the display
When does that happen: The message appears after 128 copies of
itself have been made; the messing up of the display is done
after 16 copies of itself have been made
Resetproof: Yes
Can copy to harddisk: No
Remark: Probably made in England

Pg 1 Ln 3 Pos 0
```

known virus and anti-virus programs. The author also gives the impression that he intends to be easily and quickly accessible to the users of the program. The only limitation might be that his address is in the UK.

Reference is made to a series of continuing updates. Presumably, these will contain any improvements made to the program plus additions to the various libraries on the disk. No schedule or price is given, however. Perhaps announcements would be sent to those who have returned warranty registration cards.

One item that appears lacking is some form of "killed" virus to practice with. As it is, having no virus anywhere in the system (for which I am *truly* grateful), there really isn't anything for *UVK* to sink its teeth into. It would be nice to be able to see it in full cry after the foe!

UVK is distributed in the U.S. by Steve's Software, 5 West St, Woodland CA 95695. Order line: 800-487-7753; info: 916-661-3328. Suggested retail price is \$39.95 but UVK will be available at an introductory price of \$34.95 until August 31.

HELP OPTION #34; CHECK A WHOLE PARTITION/CHECK FILES MANUALLY FOR LINK VIRUSES

There can be many files on a harddisk partition or floppy disk... so that's why you can now select whether you want to scan a whole partition automatically or whether you want to scan some individual files. In case of a whole partition scan on floppy, a bootsector virus check will also be performed.

It is also possible to immunize against link-viruses. By selecting 'Set Immunize', you can specify which files you want immunized and which not, and if you want files to be immunized at all!

Files that are immunized can also no longer be deleted or edited (the latter is important to know for data files, word processing you've done & source files).

In the 'Set (De-)immunization' screen, the settings in the lower box are only valid when one of the two in the upper box is set.

Please remember that a disk must have a valid directory when you want to check link-viruses! Otherwise, the program may crash...

Press any key to return; HELP to toggle permanent help mode (which is now OFF)

Obitus: *An Arcade Adventure by Psygnosis*

Review by Alfred C. Giovetti

Obitus comes from the very British Psygnosis company who have recently opened offices in the United States to oversee the North American distribution of their products. Psygnosis has been a pioneer and innovator in the production of ST software, long before most companies doing business in the game industry were more than an idea in the mind of man. Psygnosis has produced great games, including *Bratticus*, *Deep Space*, and, more recently, those addictive *Lemmings*. *Bratticus* was an early, third-person perspective, side-view space adventure game with high resolution graphics and sound. Other than *Bratticus*, I am unaware of any other adventure game produced by the company, until the introduction of *Obitus*.

In the Pouring Rain

The plot of *Obitus* is quite simple. Wil Mason, the protagonist, is driving along in the countryside when his Volvo Estate ends up in a ditch. The vehicle refuses to start, so Wil grabs his Mac (English for raincoat), and forges out into the rain to find shelter. Wil eventually takes shelter in an abandoned medieval tower. (The logic of leaving the shelter of the car to look for shelter in a drafty old tower escapes me.) Wil falls asleep. When Wil wakes up, he has been teleported to another time and another land, where he must retrieve four tower components to activate the tower, which is really a time machine, in order to return home to his broken down Volvo.

The four tower components are really gems, which have been stolen by four evil brothers who rule the land where Wil is now. The tower is in the center of the map of the game area. Just outside

the four tower doors is a wooded maze. Beyond each of the wooded maze areas are castles where the four brothers live. The two castles to the east of the tower have one dungeon attached to each castle. The castle to the southwest has a cave maze that must be traversed before the castle can be reached. In the northwest, Wil must find his way through the mine maze to reach the castle.

Along the way Wil uses his magical bow (the bow cannot be dropped and does not appear in the object inventory) with the arrows he finds to kill anything that moves, after first interrogating it for artifacts and clues. Some of the artifacts are keys, which are essential to opening doors to other locations. Without the keys, Wil cannot complete his quest. Other objects to be found include hand weapons, food, and potions which are stored in an inventory grid of 24-items.

Very Strange

Obitus is not a role-playing adventure game, but is more of an arcade-adventure game, with the elements of sophisticated inventory control and non-player character interactions woven into it. Those who are seduced into purchasing the game by the role-playing adventure game advertising will be disappointed, unless they enjoy arcade-based adventure games.

Combat is real time, and at times the interface becomes a side-view, third-person perspective, scrolling landscape, replete with pop-up archers and other denizens reminiscent of another Psygnosis game, *Barbarian*. The action can be fast, furious, and deadly to the die-hard role-playing adventure gamer who is used to rounded combat.

Appears as if She Is in a Play...

The interface in the initial game sequence—the forest, dungeons, and mines—shows a first-person perspective view of the character's surroundings. When adventuring in the moors or the castle, the parallax or third-person side-view perspective becomes the norm. In the meadow area, you are expected to avoid and foil the assassins, who lurk beyond every bush, with dazzling acrobatics. The side-view game is very arcadish, while the first-person perspective sequences are more like role-playing games e.g. *Eye of the Beholder*.

At the bottom of the screen there is a control panel with nine mouse-activated action icons, which can also be activated by function keys. The standard adventuring commands are encompassed by the nine action icons. This control panel gives the game player access to the 24-item inventory display, the game functions screen, and the conversation or speak box. The mouse is essential in initiating and carrying to conclusion certain commands, but the keyboard can be used to great effect, especially since certain keyboard commands can be programmed for greater convenience.

One of the most confusing aspects of the game is movement in the mazes, orientation, and mapping of surroundings. A compass dominates the center of the control panel. The compass contains a miniature character icon, and eight paths on the compass represent the eight major compass points. When the character comes to a crossroad, the paths brighten up and the character can turn. The fact that the character moves in tunnel like paths in eight directions (N, S, E, W, NW, SW, NE, and SE) makes

mapping very difficult, but essential to knowing where you are. The lack of an automapping system makes manual mapping even more important.

Appeals to Your Eyes & Ears

The graphics include highly detailed and colorful drawings of the surroundings. The scrolling in the first-person and third-person views is smooth and well done. Music in the initial score is loud and entertaining. There is mood music and appropriate sound effects to accompany the exploration. Up to eight games can be saved and loaded per disk, and multiple disks can be used. The normal options of save, load and pause are available through the mouse or function key-operated control panel. Copy protection is by key word from the short, but clearly written, manual. Although a map and walk-through for the first forest maze section is included with the game, some players may need more help than this initial map.

In Sum

Obitus is a good game and a good gaming system. The real-time combat separates the game from the normal graphic adventure, but in the handling of inventory and the minimal character interaction, *Obitus* resembles a graphic adventure. The game has no automapping, minimal interaction, and you may find survival more difficult than necessary. Overall, *Obitus* is a good game with many characters and places to explore. *Obitus* deserves consideration from those who enjoy arcade-adventure games.

[Psygnosis N.A., 29 Saint Mary's Court, Brookline MA 02146, tel: (617)731-3553, Fax: (617)731-8379, Price: \$49.99, Copy protection: key word from manual, RAM: 512K, Price \$49.95]

Letters to the Editor. (Continued from page 7.)

to agree that the space bar incident can be annoying, but I went through that all with Bullfrog's *PowerMonger* so I might have figured it out on *Pop II* if I'd needed to. When running from a hard drive, that frog logo screen doesn't even show up. I have been following the *Pop II* thread on GENie, and don't believe I have seen anyone else having the hard drive problem. The game does come in two versions, one for 512K and one for 1Meg. The smaller version is not hard drive installable. Most questions revolve around the 60HZ.PRГ that is in the AUTO folder and must be run before POP2.TOS on ST's in the United States. This may have been the FIXIT.PRГ that Mike wrote about in the review, but I'm not sure.

I would have to disagree also with Mike on having a practice mode with all the effects available. I found that the gradual introduction of the more powerful effects was a good learning experience, and kept me from being overwhelmed all at once. Since the computer often got effects before the human player, it was very helpful to see how they could be best put to use. Also, as an original *Populous* player, I was familiar with the basic mechanics of the game, so techniques like how to raise and lower land quickly came quite naturally. *Pop II* has a computer assist mode for raising and lowering land that is good during the early stages of a level for doing some of the "busy" work.

One of the best features of *Populous II* that Mike failed to mention was that it can be played by two people using modems or a null modem. Playing head-to-head against another human puts the game into a whole other realm. What was a methodical, strategic game against the computer becomes a frenzied, revenge game to send your opponent into a panic.

I realize that not all kinds of games appeal to all players (I dislike platform games), and I know that the players who liked the original *Populous* will probably get *Populous II* despite Mike's review. I just hope that the review will not discourage someone unfamiliar with

the program from buying it if the game concept seems at all interesting to them.

Craig Kerns
Seattle, WA

Kudos for CN

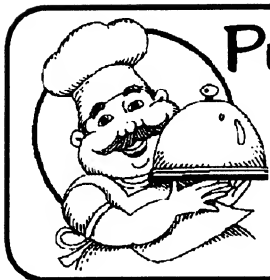
Dear Current Notes,

Having now been a subscriber and reader of CN since last Fall, I'd like to take this opportunity to process a few words of my own and send them your way. Firstly, I extend my appreciation for a fine effort. One does not wind up in the Atari world by default and, consequently, one does not exactly find this world brimming with pertinent Atari news on every news stand. Until I found your ad in Toad's Silicon Anniversary Catalog, I'd been relying on magazines that kept disappearing and/or hiatusing with all too great regularity—my additional thanks to the total Toad effort, too!

So far, I definitely like the breadth and gist of CN's articles. After STart's demise and Explorer's hiatus, I surely entertained a fair share of doubt and dread for my home computing needs. I'm part of the Intel—processor world at work (though I refuse to use WIndows), but my home life, my life, is different and the ST fits my applications. Then, too, I'm decidedly partial to the tone of most CN articles. Not only do I tend to follow the descriptions and technical things, but there's certainly an entire dimension of the authors' personalities woven into CN's articles and reviews. I like that; almost makes me feel I could phone up these people and jawbone up some advice anytime or anywhere. This is definitely not like articles about Big Blue products.

Anyway, my thanks, again, for your efforts. I wish I'd been a little more attentive a little earlier. Maybe this summer I'll try not to ignore the Atari completely so as to where I have to retrain next fall again. Not likely, but I can try!

Art Banet
Anchorage, Alaska



Public Domain Potpourri

by Brian Miller

My Brain May Be Fried, But I'm No Bozo!

For the past three months I have been immersed in the study of the C programming language. If you recall, I made mention of my travails in one of my recent columns. Though I am not at all unhappy with my grade, I must confess that I feel I have only scratched the surface of this formidable language. I am now only beginning to recover from the effort I had to put forth to get through my class. I have begun to re-discover there must be life after C.

A few days ago, I realized that I would again miss the deadline for submitting an article to *Current Notes*, if I didn't act quickly. Unfortunately, I had been so preoccupied by my class, I didn't have the foggiest notion of what to feature. In my panic, I rummaged through my collection of PD software. I could not find anything that wouldn't take a fair amount of effort and time (which I realized I had already run out of) to write about. I then consulted *Current Notes* and found a program that I believed would be of interest to readers. Do you want to take a stab at what I chose? If you guessed *Sozobon C V1.33i* (CN #679D), you're right.

Do you think I feel as confident in my ability to review this program, now that I have not only missed the deadline, but exceeded anyone's notion of "fashionably late?" Unfortunately, no. For the past several days, I have been trying to translate not so portable C code taken from my course examples for use with this PD compiler. My success has been marginal at best. At this point, I don't think I can offer a comprehensive review of the program. What I believe I can do is suggest some of the difficulties you will have to overcome, should you try *Sozobon*. For those anxious to get to the bottom line, here it is. If you don't have a C compiler, and have wanted to experiment with C then you should give this modified version of *Sozobon C* a try.

The authors have made a substantial effort to fix known bugs in the compiler, and to create a program that attempts to automate the process of installation. However, if you find writing C programs that work nothing short of tedious, the fault is not entirely yours. *Sozobon* is not an integrated package. Unlike many commercial products that allow you to write, test, and

debug code from within the same application, *Sozobon* does not.

This modified version of *Sozobon C* has been through several revisions already. The authors include a list of hoped for enhancements that should make the program easier and more reliable to use in the future. One of the program's strong points is that it features an installation program that automatically creates the necessary folders, unpacks support files, and configures the GEM environment to enable the compiler to work. From the user's point of view, the installation program works in a fashion similar to *Turbo C++*. You merely start the installation program, and you can then watch as programs are "unpacked" and directories are created. Once the installation process is complete, you should have all the necessary files to start programming. I gave up in using another PD compiler available for the ST, when I realized how difficult it would be to install the program and its support files.

As I already mentioned, *Sozobon* does not offer an integrated work environment. Before you can start programming, you will need to find a suitable text editor. If you are currently using a good text editor, preferably installed as a desk accessory, creating programs will be less frustrating. Once you have written your code and exited your text processor, you can then attempt to compile your work. Unless you are extremely lucky or skilled, you will need to decipher the error messages that are displayed to the screen, and saved to a report file. While the error messages are more English-like than in previous versions, I did not find them to be particularly helpful or necessarily correct.

While the best de-buggers should be taken with several grains of salt, I was concerned with the 11 error messages that flagged my program of about as many lines of code. I already knew my test program worked, since I had written it to satisfy one of my course projects. *Sozobon* is modeled on the original Kernighan and Ritchie C. My original program included a function prototype, which the compiler could not interpret. Most compilers support ANSI standards, which encourage use of function prototypes. *Sozobon* apparently does not. However, ANSI support is high on the list of priorities for future releases.

Without the prototype, the program compiled without error and displayed the menu screen. Unfortunately, the program froze at this point, and I have yet to be able to have the program correctly read data from a file.

I next attempted to compile a simple Bubble Sort. I had learned from my first effort, so I was able to successfully compile this program without too much difficulty. I then tried to run the program. After a few seconds a message flashed to the screen. After several attempts, I was finally able to read the "stack overflow" message that was displayed to the screen each time I ran the program. I first tried to re-configure

the GEM Environment using one of the support programs that is copied to the Auto folder when you first install the program. Those changes did not work. I then consulted the documentation. I found mention of a bug that can occur if an integer array is too large. After reducing the size of the array, I was finally able to get the program to compile and work.

As part of my course work, I had to write a bubble sort as well as two other routines. The program sorted small, medium and large integer arrays. It also calculated the time required to sort the arrays for each routine and array size. Though I reduced the array sizes to avoid the problems I had already encountered, I have yet to successfully translate the time functions to work with *Sozobon*.

These problems suggest another area in which this modified *Sozobon* compiler could be refined in future versions. While the installation program creates a documentation folder and unpacks several documents, it would be very helpful if a future version were to include one comprehensive manual, complete with index. This would simplify the task of writing programs. On-line help within an integrated environment would also be wonderful.

Despite the frustrations I have encountered to date, I am not discouraged. Up to now, I have been unable

to apply any of the C programming lessons I have learned on my favorite computer. Thanks to this worthy public domain compiler, however, I now have that opportunity. Sure, I would like to see the program enhanced. I have been using *Turbo C++*, which offers many sophisticated features. It, in contrast to *Sozobon C*, is not a public domain program. Borland reminds me of that frequently with invitations to purchase their newest program releases. If I were made of money, I could keep up with the enhancements Borland adds to their products. The authors of this PD program do not ask for my hard-to-come-by money. All they ask is for my patience. I can spare that more easily than I can another \$99.00 to upgrade to the most recent incarnation of *Turbo C++*.

I can't say for sure whether you will be reading this in the final Summer issue of *Current Notes*. Frankly, I didn't have the nerve to ask Joe Waters to hold the presses as I tried to compile my Bubble Sort program just one more time. Incidentally, if the title of this month's article has you a bit puzzled, closely study the name of this public domain C compiler. It's a word puzzle itself.

Until next time, take care!!

■ ■ ■ ■ ■

Air Warrior Update

Still High on Atari

by Mike Heining, (c) 1992

Atari will continue to be supported in the imminent upgrade to the popular *Air Warrior* air combat simulation on GENie, the General Electric Network for Information Exchange. The welcome news came May 26 in a telephone conversation with Robert Wolf, *Air Warrior* manager from Kesmai Corp. headquarters in Charlottesville, Virginia.

"That rumor probably started because we were slow in getting the beta ready for Atari," said Wolf. "But we're certainly not throwing Atari away. We'll add the Atari beta to the others done already (IBM compatibles, MacIntosh, Amiga) before releasing the overall update to page 870 (the *Air Warrior* area on GENie)."

Upgrade Due ASAP

Wolf said the upgrade should debut ASAP, in a month or so—meaning late June or July. "Really substantial upgrades are coming," Wolf added, referring in part to the Super VGA version being developed. "We plan to spread that look and feel to other platforms too," he said.

Although the most recent *Air Warrior* upgrades appear to be annual, Wolf explained that is merely a coincidence; upgrading is essentially continuous. As part of the enhancement, the World War I theater eventually may evolve into a separate game.

My Finest Hour

Thanks in large part to the AdSpeed enhancement boosting my Mega ST from 8mHz to 16mHz, the other night I enjoyed my greatest *Air Warrior* success by getting three fighter kills and landing them all after an equally notable bombing mission. With the speed boost and Atari's 320x200 low resolution offering excellent large graphics, once again I feel as competitive as any IBM or Mac 33mHz or 40mHz whizzer squinting at that teeny VHS resolution. If you've been wondering what *Air Warrior* is all about, get the public domain program disk from *Current Notes* (CN #569). Then join GENie, go to page 870, and see what you've been missing. Just be sure to guard your wallet—at \$6 an hour plus any local long distance charges, your fun quota is going to fly head-on into your budget coda.

New Disks for July/August

#700/#701D: SpiritWare's Bible Concordance

SpiritWare's Bible Concordance program and SpiritEd text editor desk accessory. Complete GEM interface, loaded with fantastic features, blazingly fast, and shareware. The concordance program is on disk #700 and the the King James Version New Testament text for use with SpiritWare's Concordance program is on #701D.

#702D: Calligrapher Demo

Demo version of Calligrapher—the Ultimate Writing Machine from CodeHead Technologies and Working Title US! Disk contains everything you need to quickly set up the demo, including an example document that will take you on a tour of some of Calligrapher's many powerful features.

#703D: Eliemouse and More

ECCB: Ver 6 of The Eliemouse Complimentary Coloring Book for young children adds children's animation. Color the picture and then animate the action by clicking on the animation box.

E_PRS: A game for young children based on the old game Paper, Rock, Scissors, but with a new ingredient added, Eliemouse.

Play Spell: A joystick-controlled platform arcade. Children maneuver a little man to collect letters to form basic words. List of words cannot be changed. (Color only.)

#704D: ST Writer Elite V4.8

Here is the latest version of *ST Writer*, a very popular public domain word processor for your ST/Mega/TT, designed to work with Dave Small's SST and CodeHead's TEC on ST computers as well as on STe, and TT. 1.44 Meg floppy disk formatting is supported. Fully configurable for Tab, Background Black/White screen, default file specifier, format line settings. This update also includes the German and Spanish versions as well as the MagniWriter version for the visually handicapped. This is the last upgrade until MultiTOS.

#705D: Calamus Winners

Here are the winning entries in the 2nd annual Calamus Family Creativity and Design Contest. Includes winning CVG files as well as CDK files. (CDK are LZH'd and must be deARC'd.)

#706D: Utilities

DISKSAVE: Will recover a disk that has bad sectors, fat, etc.

FINDER12: Automatically locates whatever files an executing program is looking for. Displays an error screen showing what files are not located. C/M, runs as a DA.

JCLABEL3: This mailing label manager has lots of features and utilizes the "front end" interface designed by Mark Matts.

JUMPST25: JumpSTART 2.5 is a desktop alternative that allows the users to assign buttons to their most commonly used files and to assign 20 character descriptions to these buttons.

ONTIME22: V2.2 of DA/Program allows you to set the system date/time, view a calendar of the month, select a background fill you like, put clock anywhere on screen.

TOOL19: A set of tools that include listing/editing of File Allocation Tables, Hex dumping of files, sectors or memory, searching files, sectors or memory, checking, repairing and optimizing file structure.

WORM: Puts a read only flag on all the files in a partition of a drive. To delete a file, hold the <ctrl> key down when you delete it.

FONTKILL: Type One Font Killer by David C. Troy gives you the option of removing Type One font stored in a PageStream generated PostScript file.

#707D: Warp 9 Pictures/Fonts

A set of 32 pictures (PC1, PC2, and PC3) that are great for Warp 9 background use or for just plain looking at. All are very good, some are exceptional!

W9_FONTS: Replacement screen fonts for use with Warp 9 contain the proper graphic characters such as arrows, close box, check marks, Fuji and so forth.

CHERRYHI: Improve the readability of text on your high resolution screen with this font.

MOVEPICS: Produces random Warp 9 background pics.

#708D: Business Demos

INV_610: V6.10 of the popular Inventory-Pro from Hi-Tech Advisers, a complete working program to track inventory, do lists, labels, value and reorder calculations, etc., etc. The only limitation of this software is the maximum entry of 100 records.

PAYXPRTD: Excellent payroll program has full reports and the only limit in the demo is

the number of employees. Also includes Version 1.5 of ACC-TIME, the shareware time-clock accessory.

#709D: Game Demos

POPULOU2: Check out Populous 2, one of the best in God-playing games.

CONQUER: A tank simulator originally from Rainbow Arts will be re-released RSN. Test your abilities at Tank simulations. Awesome 3D Graphics.

KNMARE: Demo of Knightmare offers one level of the game with good sound and graphics. Great for you D&D fans. (TOS 1.4)

PENGUIN: They're small, look like they're wearing tuxes and they need to get through this maze. So it's up to you, pardner, to round up these suckers. (Color)

#710D: RPG Games

QUEST: Loosely based on Robert Asprins "Myth" series, you become Skeve or other characters and rescue Tanda from Istvan!

PACISLND: Pacific Islands is a state of the art tank simulator.

ROBNHOOD: Barry Kolbe's Robin Hood, a shareware, action/RPG similar to Omnitrend's Paladin.

#711: Arcade Games

HURRY_VI: Hurry! Place 36 shapes into their proper slots before the bomb goes boom. Sounds easy? NOT...

MARBLEVI: Marbleous V1.0. Tired of dull versions of Master Mind? Try this one out. Find the secret code before it's too late.

COPS N ROBBERS: By Kevin and Larry Scott, 2-player game lets one player be the robber who must find and rob five banks while the other player is the cop who must patrol the city looking for the robber.

SNO-FITE: Another arcade-action, 2-player game by Larry and Kevin Scott where you and your opponent battle it out in a terrifying snowball fight.

#712D: Triplink! FEDBBS

Triplink! FEDBBS, the latest release from SoniC! Software. Supports ANSI, VT52, IG, and ASCII emulation. Built in verbose for ARC, LZH, and ZIP. An excellent file handler, great message base support, and IS and EXPRESS type headers. The only BBS that supports drop down menus within a BBS, telecomm mode, killer Chat mode, and much more. Very easy to set up.

#713D/#714D: Transcendence BBS Demo

Transcendence v2.0517 (May 17th 1992) demo. The first public release of this BBS program. It is a complete BBS, all features intact (some are limited, but not removed). It

requires 1 meg of RAM and a hard drive. This is a 2-disk set.

#715D: ST-Keep BBS

ST-Keep supports up to 32000 users, 32000 message bases and directory areas, 255 floors, 255 doors (on-line games, etc.), and 15 groups. Total sysop and user configurability directly from the BBS or the configuration program. Constantly upgraded. The fastest and most versatile Atari ST BBS around!

#716D: Telecom Programs

ASNI51: Assassin is an excellent online BBS game. Works with Forem, Turbo, RATSoft, etc. Instructions included.

GE_241: Galactic Empire is a multi-player online BBS door game of space conquest (only useful if you are a BBS Sysop) compatible with all BBS's that allow users to run external programs.

GHOSTWRT: Ghost Writer desk acc takes any ASCII file (with some RAM limitations) and uploads it to the message area of a BBS or online service.

JOUTE: Shareware combat game allows you to play only over modem. However, game supports a one-player mode just to see and understand the concept of the game. Incredible graphics.

RUFUS110: RUFUS 1.10, terminal program for the power user can be used as a Desk Acc or a stand alone program. Background file transfers allowed in Zmodem and Y-Modem. Many features! Commercial quality!

#717D: Utilities

ISPOOL: 1st Spooler, a print spooler desk acc uses printer configuration files from First Word. Shareware from Luxembourg!

BOOTYME2: Install BootTyme II on the floppy in drive A, then boot your system with one switch. Automatically waits for your hard drive to spin-up, no key to press.

BUBBLE: Accessory displays a little carton bubble »I'm Here« to help locate a lost mouse pointer where-ever it is, press the right hand mouse button. Works with all programs, all STs and TT too, all screen resolutions and with overscan cards too.

CHANGESZ: Alters the cluster size on your floppy disks to give more storage space.

COMPANY: Desktop Companion desk acc with various file and utilitarian functions made available from under the 'Desk' menu. Includes disk formatter, clock, and others.

CTCAPS10: Two utilities, a unique Caps-Lock status indicator and a plethora of utilities that are controlled with CTRL-ALT+keypress.

DOTS: A simple screen saver, will put different colored dots on your screen till the timer runs out and then starts over.

ESHL224: EDM Shell 2.24 by David Holmes is a powerful, easy-to-use archive shell which works with ARC, LZH (both lh1 and lh5), ZIP, and ZOO. It uses the EDM interface, and has configurable command lines (create your own commands!), and a step-by-step manual. TOS 1.4 or less req.

FIND_ALL: Easily searches a group of files for a specific string. When a match is found, it prints the filename it was found in followed by the line count, followed by the line where the match was found.

LOOKST16: View text files on screen using the mouse or keyboard to scroll up or down. Toggle colors, toggle spacing, find, repeat find, etc.

M_DEPACK: Multi Depacker v1.0 by MUG U.K. allows you to depack any file that has been packed with any of the following packers: Atomic, Automation, Ice Packer, Fire Packer, JAM Packer, Pompey Pirates.

POOLFX92: Update to Poolfix3 and Poolfix4 fixes all known bugs in Poolfix.

TIMECARD: TimeCard v1.01 is a desk acc that keeps the time that you have worked on the computer.

#718D: Ideal_List V3.105

Ideal_List v3.105 – German Freeware. An incredible text file utility featuring up to 9 column printing, source code formatting, viewing, print preview, background printing (from desk accessory), support for Desk-Jet, SLM605 (and many other printers) and much much more! It's in English!!

#719D: Utilities

ARCGSH41: An Archive Shell from Germany that supports many, many archive programs. (Not included, supply your own of the TTP variety.) Will support ZOO, ZIP, LZH, ARJ, TAR, etc, etc, and even UUcode utilities. Call view/edit programs from within this totally GEM based program.

BED: Binary Editor from the UK will work at the file, disk, or RAM level. Features a full disassembler too!

HDINFO17: Hard disk information ver 1.7 has virus check that is much faster than ver 1.0 and "skip" function also updated.

JAMES12: "James the Desktop Butler" multi-function desk acc from Luxembourg features a screen blanker, mouse speeder, disk step rate, VBL emulator, VT52 emulator, and about 20 other functions.

LZH201K: This version fully supports the faster and more efficient LH5 (Quester)

method that has become the standard for .LZH compression.

PROTECT6: Monitors for disks with executable boot sectors and for programs modifying another.

REQST109: Ver 1.09 Of Request, GEM shell for the Questor LH5 Series archiver.

RE_BOOT: Re_Boot2 delays the bootup process so your hard drive has time to come up to speed. Can also be used to cause a cold-boot reset from the desktop or other shell.

SERIALFX: SerialFIX is a program/CPX use to fix problems in the ST/TT Modem 1 port (for STE/TT users) or the Serial Port (for ST users).

TREEVIEW: German desk acc displays the file organization of your disks, of particular value to a hard drive owners.

#720D: Monochrome Word Fun+

SEARCHME: Search Me is a new freeware word search puzzle generator for all Atari ST's. You can save and load puzzles to disk, print them out, save them as DEGAS pictures or play them right on the computer! Create your own custom word lists or use the supplied dictionary.

DBWRITER: Version 1.5 adds automatic block option dialog display and fixes a bug affecting the delete key when used at the end of a document. Some other minor bug fixes round out this minor upgrade from 1.4. The dictionary file remains unchanged.

JUMBLE: ABC Jumble is freeware educational game for the ST that lets kids sort the letters of the alphabet after the computer jumbles them up.

JUMBLE2: JUMBLE puzzle word unscrambler includes about 1,000 words in the program to help you to find the correct answer to the JUMBLE word. Works in all resolutions.

ZESTKENO: ZeST Keno allows you to play and analyze hundreds of Keno games in a very short time. Test your favorite numbers, try out custom number combinations. Text and graph options for the results!

MONOGIFF: Monochrome GIF Viewer works as .TTP has 4 different dither options. Works on 1/2 Meg machines.

BS: Simple CPU speed comparison system provides one of the best demos yet for Atari computers!

MUMBO: Mumbo Jumbo, word game where jumbled word is displayed in a top window; you type in your guesses in the bottom window.

#721D: Demos

SIL137ST: Demo of Silhouette V.1.37 a bit-image and vector graphics drawing pro-

gram offering powerful functions such as auto-tracing, bezier and bpsline curves and postscript output. Mono ONLY.

G_MAN30D: G_MAN 3.0 FontGDOS/FSMGDOS/GDOS/G+PlusDOS Font installer will do everything but Save the EXTEND.SYS/ASSIGN.SYS to disk.

UVKILLER: UK Virus Killer program helps you protect your system.

#722D: Quotes and Names

QUOTE1_0: Presents you with a quote of the day (or more appropriately, quote of the boot-up). Entertaining.

GREETING: Auto Folder displays a short message, you specify the message, during booting.

ALPHA: A neat utility that creates lists of names, thousands of them! Use your own custom parameters. Mono.

SPIDSPEL: Well-executed hangman-type game with a dictionary that holds 4000 common words. Entertaining animations hold children's interest. Mouse-driven, color only.

#723D: Utilities

STRPFM30: Strip Formatter is a format utility that takes it all off! Background music and configurable format options. Rated R

CAL62B: New version 6.2b of Calendar desk accessory now talks with Multidesk Deluxe 3.4 to see if it has loaded as an MDX. More room for events, cyclic events, save/load/merge, etc.

MEMORY: Set of small utility programs to display the amount of RAM your computer has. Includes various programs to 'fool' the computer into thinking it has less RAM than it really does, which can come in handy when using some ill-behaved programs.

STSAVER2: This Screen Saver displays a color or monochrome picture in a floating balloon when no keyboard, mouse or RS232 port activity occurs for a period of time. Ver 2.0 automatically selects a new balloon image for the next boot up. Complete instructions included.

ZESTMENU: ZeST Le Menu is an ST Medium resolution program that runs other programs. Up to 44 selections per menu page to choose from with either a mouse press or a key combination. It is mainly written for use with a hard drive, but it could be used with floppies or ramdisks.

#724D/#725D: Font GDOS

FontGDOS, the complete Atari replacement for GDOS. #724 contains all the .ACCs, and

CPXs and #725 contains the printer drivers needed to use FontGDOS. Includes several documentation files.

#726: MGR/MW/RMGR

MGR and MW are windowing systems for MiNT that allow you to run multiple processes in MiNT with a window for each. Similar to X Windows for unix machines. MGR is based on the work of Bellcore, while MW is from Allan Pratt of Atari. RMGR is a remote window manager for MGR.

#727D/#728D: Futils

Binary and source set for MiNT compatible file utilities. A two disk set.

#729D: Ksh and tcsh


Two alternative shells for use with MiNT. Tcsh, from the author of MiNT, is a port of csh that is MiNT aware. Ksh, a port of the popular korn shell, will also provide you with a replacement for the shell that comes with the MiNT distribution.

SUMMER SALE!

CN disks: \$3.50 ea.


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Current Notes GAMES, GAMES, GAMES!!

The CN Game Library has been revised to put as much as possible on DS disks. Listed here, alphabetically by category, are the games in the CN library. Summertime! Get some games and have some fun!

Adventure Games

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Rick Dangerous—500
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Simulcra—540
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lar—697
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532
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Note: numbers follow disk titles; most disks have more than one game on them.

New Disks for June

#690D: STAR TREK - THE KLINGON WAR (C) Star Trek simulates a battle between the USS Enterprise and a Klingon Invasion force. Good graphics and digitized sound. Requires ST/STe with 1 meg of RAM.

#691D: ST GAMES. (C) *FLIPPED!* – a fun colored tiles game with 100 levels. *POKER DICE* – play poker using the roll of a die, excellent. *ROULETTE V 1.5* – like the casinos, learn how to win big bucks and how to place your bets. *COMPUTER YAHTZEE* – decent PD yahtzee game, four players, GFA compiled. NOTE: Flipped!, Poker Dice, and Computer Yahtzee may not work on STe's.

#692D: EQUALIZER (C) STe Moving Pixels demo. Listen to good digitized sound as you fly through a starfield. Includes working controls for volume/bass/treble/balance/etc.

#693D: DIGITIZED SOUNDS. Digitized sounds can be played on TLC-Player (included) as well as others. Sounds included: *CNNVOICE.SND* – CNN signature music and the voice of James Earl Jones; *DRAGNET.SND* – the beginning of the Dragnet theme; *LONGTARZ.SND* – tarzan yell; *I'VEFALL.SND* – lady who's fallen and can't get up; *TWILIGHT.SND* – beginning of the Twilite Zone theme; *ARNIE.SND* – Arnold from the Terminator(?); *EASTWOOD.SND* – Clint Eastwood's famous line.

#694D: QUARTET PLAYER 3/AMODEL DEMO. *QUARTET PLAYER 3* – As well as displaying song information, Quartet Player 3 provides a nice screen display. Works on any ST/STe in any resolution. Includes 4 songs and voice sets (*Are We Our-selves?*, *Outside Lookin' Inside*, *Oh Yeah!*, *Mission: Impossible Theme*). *AMODEL DEMO* – full-screen scrolling graphics with good digitized sound in the background (works best on STe's).

#695D: COMMERCIAL DEMOS. *CONVECTOR PROFESSIONAL* – the demo version of the autotracing program from Gribnif Software. All functions work, except for Save and Print. Good for converting bitmap graphics to vector graphics. *STALK THE MARKET V2.01* – a full-featured stock charting, analysis, and portfolio management program for the Atari ST, Mega, and TT computers (Quidnunc Software).

#696D: UTILITIES. Over 20 utilities by Stuart Coates. *AUTO-CAPTURE* – utility for auto folder that will intercept all data that comes into your machine via the serial port and write it to a disk



file before passing it transparently to your communications program. *HARD DISK BOOT WAIT* – eliminates the 20 seconds you must wait before turning on your computer after the hard drive is turned on. *DRIVE BOOT SELECT UTILITY* – allows you to select drive A or B to boot from. *BOOT SECTOR STORAGE SYSTEM* – allows you to store the boot sectors of all your software on a single disk. If you have stored the boot sectors and then a virus attacks your original disk, BSSS will allow you to re-write the correct boot sectors thus eliminating the virus. *CUSTOM DISK FORMATTER* – allows you to create your own wild and wacky diskformats. You can format up to 979 kbytes or down to 1536 bytes per disk, providing that your drive can cope with the extra tracks. *DISKCAT – THE DISK CATALOGUING SYSTEM* – a database system designed to handle a list of programs, utilizes your machines RAM (fast, but limited size). *THE REVENGE DOCUMENT DISPLAYER* – loads, displays, and prints out any ASCII document (includes many features). *DRIVE DIVERTOR* – allows you to run software that is designed for floppy only systems on a hard disk. *FILE KILLER* – small utility that can be placed in the auto folder of your boot disk that allows you to delete files forever. *THE FUNKY SCREEN FLIPPER* – turn your Desktop completely upside-down! *JCLABEL* – label printer for Med-res or Hi-res screens. *MARROW* – small utility that allows you to use your mouse instead of the cursor keys from within almost any program. *PC-TRACE* – very small program that allows you to find out where a machine code program is currently executing. *ST-REPLAY/MASTER SOUND CONVERTER* – converts samples between the Replay and Master Sound 2 formats. *SCAN-4-PIC* – allows you to examine program (and data) files for hidden pictures, and then save them out as a DEGAS compatible picture file. *ST-WORM* – "delete protects" your disk drives (both hard, floppy, and RAM) so that you can't accidentally erase your data. Disk also includes: *DRIVE B: INSTALLER/DE-INSTALLER*, *DATA FILE TO BASIC CONVERSION PROGRAM*, *GO-ACC DESK ACCESSORY LOADER*, *SAMPLE COMPRESSOR*, and *STARTGEM bug fix for TOS 1.4*.

#697D: ST GAMES. (C) *EUCHRE* – pits you and computer partner against two computer opponents. *5 OF A KIND* – allows one or two players to compete in a yahtzee type game. *INVASION OF THE MUTANT CATERPILLARS* – demonstrates the new STOS 3D programming language. *BANG!* – figure out where the exploding mines are hidden on a grid (also runs in mono). More.

#698D: CALAMUS FONTS No. 7. Includes *Albatross Medium*, *Alexandria Medium*, *Andromeda Medium*, *ANS*, *Arabian Normal*, *Ashley*, *Becker Medium*, *Black Forest*, *Caligula*, *Caraway Bold*, *Deja_Vu*, *Dobkin*, and more.

#699D: BUSINESS CLIP ART. 48 .IMG files of work/office scenes and people in various other occupations (football player, dancer, etc.)

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Save \$0.50 on each disk, until September 21, all CN disks are **\$3.50 rather than \$4.00**. If you order is for **10 or more** disks, disks are **only \$3.00 each**. You normally can get 10 CN disks for \$35. With our SUMMER SALE, you save \$5.00 on that 10 disk order. Add \$1 S&H for every 6 disks or fraction thereof. If you need a CN catalog, call or write. CN Library, 122 N. Johnson Rd, Sterling, VA 20164. (703) 450-4761.

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February 1992

- 640: System Disk 1.** For 520ST owners, everything you need to ARC and unARC files.
- 641d: System Disk 2.** For 1040ST/Mega owners, everything you need to ARC and unARC files plus SuperBoot and more.
- 642d: System Disk Archives.** Complete archives for disks 640 and 641.
- 643d: Utilities.** CarHold, Cookies, DBEyes, EDDA.ACC, EDM Shell 2.20, Pathmap 1.0, N_Desktop, Nosey, StdCat50, TLC Programs (TLC_Atr2, TLC_Book2, TLC_Form2, TLC_Fxr2, TLC_Namr2, TLC_Play2, TLC_Show2).
- 644d: Write-On Demo.** PD scrolling demo of the Write On! Req 1 MB (M).
- 645d: Copilot.** Runtime version of eSTeem PILOT, an authoring language for creating tutorials, drills, tests, interactive dialog, games, and simulations.
- 646d: Arcade Games.** Noids V100, Demolition Man 2.0, 3_Shoots. (C)
- 647: GP Edit Demo Games.** Fully playable: Bobble, MS.Pac, and MultiGame (Worm, FireCop, Megapede, Breakout, and Setrys.) (C)
- 648d: Commercial Demos.** Data Diet, EdHak Ver 2.2, MultiDesk Deluxe, Word Search Creator, Crossword Creator II, and MIDI Spy.
- 649d: Finance.** Checkbook, Stock→Smart V2.1, MEGA-Check.

March 1992

- 650d: GFA Expert.** Alternative GFA-BASIC 3 Manual, 2nd Ed. by Han Kempen, The Netherlands. 120+ pages.
- 651d: Utilities.** AtariHD5, The latest official Atari Hard Drive Utilities, DiskLock, Faze, FujiMaus, JumpSTART 2.0, Mouse Boot, PinHead 2.1, and XBOOT Demo.
- 652d: Utilities.** EDM Shell V2.21, LzhShell, ST ZIP v1.1, Super Boot V7.4, and Thrash.
- 653d: Astronomy.** GnomPlot v4.2 and Satellite Prediction Program V4.04.
- 654: 21/Camels.** 21 (blackjack game for one player against dealer), Camels (whacko shoot-em up). (C)
- 655: Ammotrak/Gold Seeker.** Graphics arcade games. (C)
- 656d: Triples/Robot Repairs.** Games. (C)
- 657: Name Brand Clip Art** 50 product logos. (IMG)
- 658d: Language Helper.** MultiLang (translation between German/English words.) SpellOne (spell-checker) Abreviator ST V11 Demo
- 659d: Utilities.** 2Columns, BootTyme, DC Reserve, Edi-Util, FileTool, Fishes, FujiWatch, GoGoST42, K_Text V1.6.4, Lock, NBM, v1.2, RAM_Test, ShowMem4, SilkMouse2, StarSaver V0.50, WhatIs57

April 1992

- 660d: Clip Art.** Wild West 68 IMG
- 661d: Clip Art.** Military 91 IMG.
- 662d: Clip Art.** Police 44 IMG.

- 663d: Clip Art.** Teddy Bear 1, 30 IMG.
- 664d: Clip Art.** Teddy Bear 2, 30 IMG.
- 665d: Clip Art.** Teddy Bear 3, 30 IMG.
- 666d: Clip Art.** 43 ESG Samples (IMN).
- 667d: Clip Art.** Kids/School 69 IMG.
- 668d: Clip Art.** Caricatures 95 IMG.
- 669d: Clip Art.** Miscellaneous 46 IMG.

- 670d: Picture Packer.** Picture compressor, converter, and a graphics editor, all in one package.
- 671d: Crack-Art.** Shareware drawing program from Germany, includes many sophisticated drawing features.
- 672d: Diabetic Recipes.** 125 diabetic recipes for use with the included Assistant Chef program. (C)
- 673d: Portfolio #1.** PD for use with the Portfolio computer: Blackjack, LZEXE, PBAS45, PortPart, PTool, TBasic, XTerm, GuiChess, Lmine.
- 674d: Uniterm 2.0e.** Best terminal program for the ST. Full featured, complete with users guide.
- 675d: 3 Arcade Games:** Blox, Katnix, Other Place. (C)
- 676: CVG Clip Art.** 57 vector graphic pictures (CVG) for use with Calamus.
- 677d: Mathematician's Helper.** Fast fourier transform grapher, Matrix manipulation, turing system analysis, calculator, and subcal.
- 678d: Spice.** Circuit analysis program: analyze electrical circuits of any nature.
- 679d: Sozobon C.** V1.33i, an ideal way to get acquainted with this popular language. Includes docs.

May 1992

The MiNT Collection: 680-684

- 680d: MiNT Binaries.** The multitasking kernal used in Atari's upcoming MultiTOS. Includes docs and basic shell. Req at least 1 MB. Best results with a hard drive.
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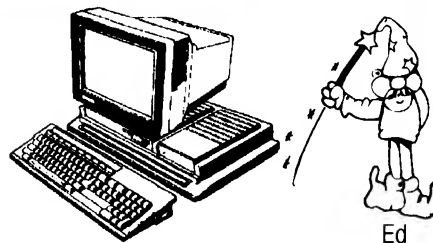
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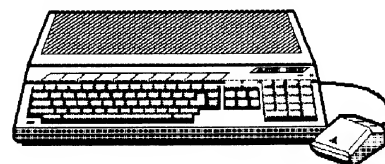
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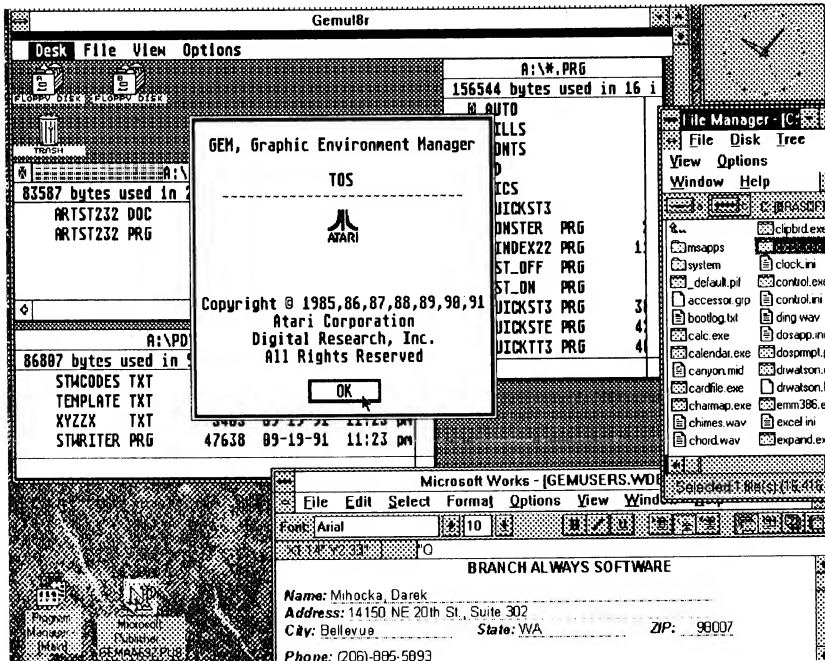
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